GenCore version 5.1.6
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OM protein - protein search, using sw model

Run on: December 4, 2003, 19:20:30 ; Search time 35 Seconds
(without alignments)
3092.643 Million cell updates/sec

Title: US-09-294-539-4
Perfect score: 2952
Sequence: 1 MEPPTSHVTNAFSDSDSASV.....RSGLSSSSSSTSIGAIRPRR 582

Scoring table: BLOSUM62
Gapop 10.0 , Gapext 0.5

Searched: 684280 seqs, 185983659 residues

Total number of hits satisfying chosen parameters: 684280

Minimum DB seq length: 0
Maximum DB seq length: 2000000000

Post-processing: Minimum Match 0%
Maximum Match 100%
Listing first 45 summaries

Database : Published_Applications_AA:*
1: /cgn2_6/ptodata/2/pubpaa/US07_PUBCOMB.pep:*
2: /cgn2_6/ptodata/2/pubpaa/PCT_NEW_PUB.pep:*
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8: /cgn2_6/ptodata/2/pubpaa/US08_PUBCOMB.pep:*
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11: /cgn2_6/ptodata/2/pubpaa/US09C_PUBCOMB.pep:*
12: /cgn2_6/ptodata/2/pubpaa/US09_NEW_PUB.pep:*
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14: /cgn2_6/ptodata/2/pubpaa/US10B_PUBCOMB.pep:*
15: /cgn2_6/ptodata/2/pubpaa/US10C_PUBCOMB.pep:*
16: /cgn2_6/ptodata/2/pubpaa/US10_NEW_PUB.pep:*
17: /cgn2_6/ptodata/2/pubpaa/US60_NEW_PUB.pep:*
18: /cgn2_6/ptodata/2/pubpaa/US60_PUBCOMB.pep:*

Pred. No. is the number of results predicted by chance to have a score greater than or equal to the score of the result being printed, and is derived by analysis of the total score distribution.

SUMMARIES

Result No.	Score	% Query Match	Length	DB	ID	Description
1	2934	99.4	582	12	US-09-848-841-10	Sequence 10, Appl
2	1737	58.8	576	12	US-10-328-675A-4	Sequence 4, Appli
3	1672.5	56.7	588	8	US-08-908-884-14	Sequence 14, Appl
4	1672.5	56.7	588	9	US-09-908-323-14	Sequence 14, Appl
5	1672.5	56.7	588	12	US-10-328-675A-2	Sequence 2, Appli
6	1629	55.2	604	12	US-10-328-675A-64	Sequence 64, Appl
7	1276	43.2	593	8	US-08-908-884-3	Sequence 3, Appli
8	1276	43.2	593	9	US-09-908-323-3	Sequence 3, Appli
9	1276	43.2	593	11	US-09-934-455-74	Sequence 74, Appl
10	1276	43.2	593	12	US-09-848-841-17	Sequence 17, Appl
11	1276	43.2	593	12	US-10-225-068-242	Sequence 242, App
12	1276	43.2	593	14	US-10-079-035-3	Sequence 3, Appli
13	1222.5	41.4	579	12	US-10-328-675A-6	Sequence 6, Appli
14	1213.5	41.1	600	12	US-10-328-675A-20	Sequence 20, Appl
15	1213.5	41.1	601	11	US-09-934-455-434	Sequence 434, App
16	1213.5	41.1	601	12	US-10-328-675A-72	Sequence 72, Appl
17	1117.5	37.9	635	12	US-09-848-841-16	Sequence 16, Appl
18	1060.5	35.9	591	12	US-10-328-675A-66	Sequence 66, Appl
19	1045.5	35.4	592	14	US-10-047-593-2	Sequence 2, Appli
20	1045.5	35.4	592	14	US-10-047-593-4	Sequence 4, Appli
21	1045.5	35.4	609	15	US-10-318-780-11	Sequence 11, Appl
22	1045	35.4	607	15	US-10-318-780-10	Sequence 10, Appl
23	1031	34.9	586	12	US-10-328-675A-8	Sequence 8, Appli
24	1009	34.2	574	12	US-10-328-675A-70	Sequence 70, Appl
25	995	33.7	475	15	US-10-318-780-4	Sequence 4, Appli
26	987	33.4	455	12	US-09-848-841-12	Sequence 12, Appl
27	971.5	32.9	601	12	US-10-328-675A-18	Sequence 18, Appl
28	844.5	28.6	409	15	US-10-318-780-21	Sequence 21, Appl
29	839.5	28.4	533	11	US-09-934-455-402	Sequence 402, App
30	825	27.9	217	12	US-10-328-675A-46	Sequence 46, Appl
31	823	27.9	219	12	US-10-328-675A-30	Sequence 30, Appl
32	801.5	27.2	467	11	US-09-934-455-28	Sequence 28, Appl
33	801.5	27.2	467	12	US-10-225-068-170	Sequence 170, App
34	782.5	26.5	381	15	US-10-318-780-17	Sequence 17, Appl
35	739	25.0	325	12	US-09-848-841-8	Sequence 8, Appli
36	678	23.0	369	12	US-10-328-675A-74	Sequence 74, Appl
37	644	21.8	165	12	US-10-328-675A-38	Sequence 38, Appl
38	614	20.8	165	12	US-10-328-675A-40	Sequence 40, Appl
39	599	20.3	165	12	US-10-328-675A-42	Sequence 42, Appl
40	597	20.2	255	15	US-10-219-220-290	Sequence 290, App
41	502.5	17.0	180	15	US-10-318-780-35	Sequence 35, Appl
42	493	16.7	165	12	US-10-328-675A-58	Sequence 58, Appl
43	485	16.4	165	12	US-10-328-675A-32	Sequence 32, Appl
44	477	16.2	165	12	US-10-328-675A-34	Sequence 34, Appl
45	470	15.9	165	12	US-10-328-675A-48	Sequence 48, Appl

ALIGNMENTS

RESULT 1
US-09-848-841-10
; Sequence 10, Application US/09848841
; Publication No. US20030172411A1
; GENERAL INFORMATION:
; APPLICANT: E. I. du Pont de Nemours and Company
; APPLICANT: Butler, Karla
; APPLICANT: Falco, Carl
; APPLICANT: Famodu, Omolayo O.
; APPLICANT: Fang, Yiwen
; APPLICANT: Han, Feng
; APPLICANT: Heppard, Elmer
; APPLICANT: Liu, Zhan-Bin
; APPLICANT: Miao, Gou-Hau
; APPLICANT: Odell, Joan
; APPLICANT: Rafalski, Antoni
; TITLE OF INVENTION: Disease Resistance Factors
; FILE REFERENCE: BB1252 US NA1
; CURRENT APPLICATION NUMBER: US/09/848,841
; CURRENT FILING DATE: 2001-05-04
; PRIOR APPLICATION NUMBER: 60/107,242
; PRIOR FILING DATE: 1998-11-05
; PRIOR APPLICATION NUMBER: US99/25,953
; PRIOR FILING DATE: 1999-10-04
; NUMBER OF SEQ ID NOS: 17
; SOFTWARE: Microsoft Office 97
; SEQ ID NO 10
; LENGTH: 582
; TYPE: PRT
; ORGANISM: Oryza sativa
US-09-848-841-10

Query Match 99.4%; Score 2934; DB 12; Length 582;
Best Local Similarity 99.5%; Pred. No. 7.9e-262;
Matches 579; Conservative 0; Mismatches 3; Indels 0; Gaps 0;

Qy 1 MEPPTSHVTNAFSDSDSASVEEGDADADADVEALRRLSDNLAAAFRSPEDFAFLADARIA 60
||||||||||||||||||||||| ||||||||||||||||||||||||||||||||||||

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Db          1 MEPPTSHVTNAFSDSDSASVEEGGADADADVEALRRLSDNLAAAFRSPEDFAFLADARIA 60

Qy         61 VPGGGGGGGDLRVHRCVLSARSPFLRGVFARRAAAAAGGGGEDGSERLELRELLGGGGEE 120
              |||||||||||| |||||||||||||||||||||||||||||||||| ||||||||||||||
Db         61 VPGGGGGGGDLLVHRCVLSARSPFLRGVFARRAAAAAGGGGEDGGERLELRELLGGGGEE 120

Qy        121 VEVGYEALRLVLDYLYSGRVGDLPKAACLCVDEDCAHVGCHPAVAFMAQVLFAASTFQVA 180
              ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db        121 VEVGYEALRLVLDYLYSGRVGDLPKAACLCVDEDCAHVGCHPAVAFMAQVLFAASTFQVA 180

Qy        181 ELTNLFQRRLLDVLDKVEVDNLLLILSVANLCNKSCMKLLERCLDMVVRSNLDMITLEKS 240
              ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db        181 ELTNLFQRRLLDVLDKVEVDNLLLILSVANLCNKSCMKLLERCLDMVVRSNLDMITLEKS 240

Qy        241 LPPDVIKQIIDARLSLGLISPENKGFPNKHVRRIHRALDSDDVELVRMLLTEGQTNLDDA 300
              ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db        241 LPPDVIKQIIDARLSLGLISPENKGFPNKHVRRIHRALDSDDVELVRMLLTEGQTNLDDA 300

Qy        301 FALHYAVEHCDSKITTELLDLALADVNHRNPRGYTVLHIAARRREPKIIVSLLTKGARPA 360
              ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db        301 FALHYAVEHCDSKITTELLDLALADVNHRNPRGYTVLHIAARRREPKIIVSLLTKGARPA 360

Qy        361 DVTFDGRKAVQISKRLTKQGDYFGVTEEGKPSPKDRLCIEILEQAERRDPQLGEASVSLA 420
              ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db        361 DVTFDGRKAVQISKRLTKQGDYFGVTEEGKPSPKDRLCIEILEQAERRDPQLGEASVSLA 420

Qy        421 MAGESLRGRLLYLENRVALARIMFPMEARVAMDIAQVDGTLEFNLGSGANPPPERQRTTV 480
              ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db        421 MAGESLRGRLLYLENRVALARIMFPMEARVAMDIAQVDGTLEFNLGSGANPPPERQRTTV 480

Qy        481 DLNESPFIMKEEHLARMTALSKTVELGKRFFPRCSNVLDKIMDDETDPVSLGRDTSAEKR 540
              ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db        481 DLNESPFIMKEEHLARMTALSKTVELGKRFFPRCSNVLDKIMDDETDPVSLGRDTSAEKR 540

Qy        541 KRFHDLQDVLQKAFHEDKEENDRSGLSSSSSSTSIGAIRPRR 582
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RESULT 2
US-10-328-675A-4
; Sequence 4, Application US/10328675A
; Publication No. US20030159171A1
; GENERAL INFORMATION:
; APPLICANT: Salmeron, John
; APPLICANT: Weislo, Laura
; APPLICANT: Willits, Michael
; TITLE OF INVENTION: NOVEL PLANT GENES AND USES THEREOF
; FILE REFERENCE: 30857USNPDIV1
; CURRENT APPLICATION NUMBER: US/10/328,675A
; CURRENT FILING DATE: 2002-12-23
; PRIOR APPLICATION NUMBER: 09/519,232
; PRIOR FILING DATE: 2000-03-06
; PRIOR APPLICATION NUMBER: 60/219,338
; PRIOR FILING DATE: 1999-03-09
; NUMBER OF SEQ ID NOS: 74
; SOFTWARE: PatentIn Ver. 2.1
; SEQ ID NO 4
; LENGTH: 576
; TYPE: PRT
; ORGANISM: Lycopersicon esculentum
US-10-328-675A-4

Query Match 58.8%; Score 1737; DB 12; Length 576;
Best Local Similarity 59.9%; Pred. No. 2.3e-151;
Matches 349; Conservative 94; Mismatches 108; Indels 32; Gaps 8;

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Qy         11 AFSDSDSAS-------VEEGDADADADVEALRRLSDNLAAAF-RSPEDFAFLADARIAVP 62
              |||||:  |       : | :    ||| :|:|||: | : |  |  || | ||||::  |
Db          6 AFSDSNDISGSSSICCMNESETSL-ADVNSLKRLSETLESIFDASAPDFDFFADAKLLAP 64

Qy         63 GGGGGGGDLRVHRCVLSARSPFLRGVFARRAAAAAGGGGEDGSERLELRELLGGGGEEVE 122
                 || :: ||||:||||||| : ||          |:| | :|||:||:    :| |
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Db         65 ----GGKEIPVHRCILSARSPFFKNVFC----------GKDSSTKLELKELM----KEYE 106

Qy        123 VGYEALRLVLDYLYSGRVGDLPKAACLCVDEDCAHVGCHPAVAFMAQVLFAASTFQVAEL 182
              | ::|:  || |||||:|     |  |:||| :| || | |||||| |||:|: |||:::|
Db        107 VSFDAVVSVLAYLYSGKVRPASKDVCVCVDNECLHVACRPAVAFMVQVLYASFTFQISQL 166

Qy        183 TNLFQRRLLDVLDKVEVDNLLLILSVANLCNKSCMKLLERCLDMVVRSNLDMITLEKSLP 242
              : ||| |||:|||   |:::::|||||:| |:| :|| ||:|::|:||:|:|||:||||
Db        167 VDKFQRHLLDILDKAVADDVMMVLSVANICGKACERLLSRCIDIIVKSNVDIITLDKSLP 226

Qy        243 PDVIKQIIDARLSLGLISPENKGFPNKHVRRIHRALDSDDVELVRMLLTEGQTNLDDAFA 302
              |::||| |:|  |||  ||: |||:||||:|||||||||||||:|||| || | ||||:|
Db        227 HDIVKQITDSRAELGLQGPESNGFPDKHVKRIHRALDSDDVELLRMLLKEGHTTLDDAYA 286

Qy        303 LHYAVEHCDSKITTELLDLALADVNHRNPRGYTVLHIAARRREPKIIVSLLTKGARPADV 362
              ||||| :||:| | |||||:||||||:||||:||||:|| |:|||||||||||||:|:
Db        287 LHYAVAYCDAKTTAELLDLSLADVNHQNPRGHTVLHVAAMRKEPKIIVSLLTKGARPSDL 346

Qy        363 TFDGRKAVQISKRLTKQGDYFGVTEEGKPSPKDRLCIEILEQAERRDPQLGEASVSLAMA 422
              | ||:||:||:||||:  |:   ||||| :|||||||||||||||| |||||:|||||
Db        347 TSDGKKALQIAKRLTRLVDFTKSTEEGKSAPKDRLCIEILEQAERRDPLLGEASLSLAMA 406

Qy        423 GESLRGRLLYLENRVALARIMFPMEARVAMDIAQVDGTLEFNLGSGANPPPERQRTTVDL 482
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Db        407 GDDLRMKLLYLENRVGLAKLLFPMEAKVAMDIAQVDGTSELPLASMRKKIADAQRTTVDL 466

Qy        483 NESPFIMKEEHLARMTALSKTVELGKRFFPRCSNVLDKIM--DDETDPVSLGRDTSAE-- 538
              ||:|| |||||| |: |||:|||||||||||||| ||:|||  || ::   :| ||  |
Db        467 NEAPFKMKEEHLNRLRALSRTVELGKRFFPRCSEVLNKIMDADDLSEIAYMGNDTVEERQ 526

Qy        539 -KRKRFHDLQDVLQKAFHEDKEENDRSGLSSSSSSTSIGAIRP 580
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Db        527 LKKQRYMELQEILSKAFTEDKEEFAKTNMSSSCSSTSKGVDKP 569
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RESULT 3
US-08-908-884-14
; Sequence 14, Application US/08908884
; Publication No. US20020138872A1
; GENERAL INFORMATION:
; APPLICANT: Dong et al.
; TITLE OF INVENTION: ACQUIRED RESISTANCE GENES AND USES THEREOF
; NUMBER OF SEQUENCES: 28
; CORRESPONDENCE ADDRESS:
; ADDRESSEE: Clark & Elbing LLP
; STREET: 176 Federal Street
; CITY: Boston
; STATE: MA
; COUNTRY: USA
; ZIP: 02110
; COMPUTER READABLE FORM:
; MEDIUM TYPE: Diskette
; COMPUTER: IBM Compatible
; OPERATING SYSTEM: DOS
; SOFTWARE: FastSEQ for Windows Version 2.0
; CURRENT APPLICATION DATA:
; APPLICATION NUMBER: US/08/908,884
; FILING DATE:
; CLASSIFICATION: 800
; PRIOR APPLICATION DATA:
; APPLICATION NUMBER: 60/023,851
; FILING DATE: August 9, 1996
; APPLICATION NUMBER: 60/035,166
; FILING DATE: January 10, 1997
; APPLICATION NUMBER: 60/046,769
; FILING DATE: May 16, 1997
; ATTORNEY/AGENT INFORMATION:
; NAME: Elbing, Karen L
; REGISTRATION NUMBER: 35,238
; REFERENCE/DOCKET NUMBER: 00786/339004
; TELECOMMUNICATION INFORMATION:
; TELEPHONE: 617-428-0200
; TELEFAX: 617-428-7045

```
;  INFORMATION FOR SEQ ID NO:  14:
;    SEQUENCE CHARACTERISTICS:
;      LENGTH:  588 amino acids
;      TYPE:  amino acid
;      STRANDEDNESS:  single
;      TOPOLOGY:  linear
;    MOLECULE TYPE:  protein
US-08-908-884-14

  Query Match             56.7%;  Score 1672.5;  DB 8;  Length 588;
  Best Local Similarity   56.8%;  Pred. No. 2.2e-145;
  Matches  336;  Conservative  102;  Mismatches  119;  Indels   35;  Gaps    8;

Qy         11 AFSDSDSASVEE------------GDADADADVEALRRLSDNLAAAF-RSPEDFAFLAD 56
              |||||:  |                 : |:: :|:|||: | : |  |  :| : ||
Db          7 AFSDSNDISGSSSICCIGGGMTEFFSPETSPAEITSLKRLSETLESIFDASLPEFDYFAD 66

Qy         57 ARIAVPGGGGGGGDLRVHRCVLSARSPFLRGVFARRAAAAAGGGGEDGSERLELRELLGG 116
              |:: |    |   :: ||||:||||||| : :|          |  |  | ::||:|::
Db         67 AKLVV---SGPCKEIPVHRCILSARSPFFKNLFC--------GKKEKNSSKVELKEVM-- 113

Qy        117 GGEEVEVGYEALRLVLDYLYSGRVGDLPKAACLCVDEDCAHVGCHPAVAFMAQVLFAAST 176
              :| || |:|:  || |||||:|   ||  |:||| ||:|| | |||||: :||: : |
Db        114 --KEHEVSYDAVMSVLAYLYSGKVRPSPKDVCVCVDNDCSHVACRPAVAFLVEVLYTSFT 171

Qy        177 FQVAELTNLFQRRLLDVLDKVEVDNLLLILSVANLCNKSCMKLLERCLDMVVRSNLDMIT 236
              ||::|| : ||| |||:|||   |:::::|||||:| |:| :||  |::::|:||:|:||
Db        172 FQISELVDKFQRHLLDILDKTAADDVMMVLSVANICGKACERLLSSCIEIIVKSNVDIIT 231

Qy        237 LEKSLPPDVIKQIIDARLSLGLISPENKGFPNKHVRRIHRALDSDDVELVRMLLTEGQTN 296
              |:|:|| |::||| |:|  |||  ||: |||:|||:|||||||||||||::||| || |
Db        232 LDKALPHDIVKQITDSRAELGLQGPESNGFPDKHVKRIHRALDSDDVELLQMLLREGHTT 291

Qy        297 LDDAFALHYAVEHCDSKITTELLDLALADVNHRNPRGYTVLHIAARRREPKIIVSLLTKG 356
              ||||:|||||| :||:| | |||||||||:||:| |||||||:|| |:||||:|||||||
Db        292 LDDAYALHYAVAYCDAKTTAELLDLALADINHQNSRGYTVLHVAAMRKEPKIVVSLLTKG 351

Qy        357 ARPADVTFDGRKAVQISKRLTKQGDYFGVTEEGKPSPKDRLCIEILEQAERRDPQLGEAS 416
              |||:|:| |||||:||:||||:  |:    |||| :  |||||||||||||| |||||
Db        352 ARPSDLTSDGRKALQIAKRLTRLVDFSKSPEEGKSASNDRLCIEILEQAERRDPLLGEAS 411

Qy        417 VSLAMAGESLRGRLLYLENRVALARIMFPMEARVAMDIAQVDGTLEFNLGSGANPPPERQ 476
              |||||||: || :|||||||| ||:::|||||:|||||||||| || | |          |
Db        412 VSLAMAGDDLRMKLLYLENRVGLAKLLFPMEAKVAMDIAQVDGTSEFPLASIGKKMANAQ 471

Qy        477 RTTVDLNESPFIMKEEHLARMTALSKTVELGKRFFPRCSNVLDKIM--DDETDPVSLGRD 534
              ||||||||:|| :||||| |: |||:||||||||||||| ||:|||  || ::   :| |
Db        472 RTTVDLNEAPFKIKEEHLNRLRALSRTVELGKRFFPRCSEVLNKIMDADDLSEIAYMGND 531

Qy        535 TSAE---KRKRFHDLQDVLQKAFHEDKEENDR-SGLSSSSSSTSIGAIRPRR 582
              |: |   |::|: :||::| ||| ||||| |: : :||| |||| |  :| :
Db        532 TAEERQLKKQRYMELQEILTKAFTEDKEEYDKTNNISSSCSSTSKGVDKPNK 583


RESULT 4
US-09-908-323-14
; Sequence 14, Application US/09908323
; Patent No. US20020073447A1
;   GENERAL INFORMATION:
;        APPLICANT: Dong et al.
;        TITLE OF INVENTION: ACQUIRED RESISTANCE GENES AND USES THEREOF
;        NUMBER OF SEQUENCES: 28
;        CORRESPONDENCE ADDRESS:
;             ADDRESSEE: Clark & Elbing LLP
;             STREET: 176 Federal Street
;             CITY: Boston
;             STATE: MA
;             COUNTRY: USA
;             ZIP: 02110
;        COMPUTER READABLE FORM:
;             MEDIUM TYPE: Diskette
;             COMPUTER: IBM Compatible
;             OPERATING SYSTEM: DOS
;             SOFTWARE: FastSEQ for Windows Version 2.0
;        CURRENT APPLICATION DATA:
;             APPLICATION NUMBER: US/09/908,323
;             FILING DATE: 17-Jul-2001
;             CLASSIFICATION: <Unknown>
;        PRIOR APPLICATION DATA:
;             APPLICATION NUMBER: 08/908,884
;             FILING DATE: <Unknown>
;             APPLICATION NUMBER: 60/035,166
;             FILING DATE: January 10, 1997
;             APPLICATION NUMBER: 60/046,769
;             FILING DATE: May 16, 1997
;        ATTORNEY/AGENT INFORMATION:
;             NAME: Elbing, Karen L
;             REGISTRATION NUMBER: 35,238
;             REFERENCE/DOCKET NUMBER: 00786/339004
;        TELECOMMUNICATION INFORMATION:
;             TELEPHONE: 617-428-0200
;             TELEFAX: 617-428-7045
;   INFORMATION FOR SEQ ID NO: 14:
;        SEQUENCE CHARACTERISTICS:
;             LENGTH: 588 amino acids
;             TYPE: amino acid
;             STRANDEDNESS: single
;             TOPOLOGY: linear
;        MOLECULE TYPE: protein
;        SEQUENCE DESCRIPTION: SEQ ID NO: 14:
US-09-908-323-14

  Query Match             56.7%;  Score 1672.5;  DB 9;  Length 588;
  Best Local Similarity   56.8%;  Pred. No. 2.2e-145;
  Matches  336;  Conservative  102;  Mismatches  119;  Indels   35;  Gaps    8;

Qy         11 AFSDSDSASVEE------------GDADADADVEALRRLSDNLAAAF-RSPEDFAFLAD 56
              |||||:  |                 : |:: :|:|||: | : |  |  :| : ||
Db          7 AFSDSNDISGSSSICCIGGGMTEFFSPETSPAEITSLKRLSETLESIFDASLPEFDYFAD 66

Qy         57 ARIAVPGGGGGGGDLRVHRCVLSARSPFLRGVFARRAAAAAGGGGEDGSERLELRELLGG 116
              |:: |    |   :: ||||:||||||| : :|          |  |  | ::||:|::
Db         67 AKLVV---SGPCKEIPVHRCILSARSPFFKNLFC--------GKKEKNSSKVELKEVM-- 113

Qy        117 GGEEVEVGYEALRLVLDYLYSGRVGDLPKAACLCVDEDCAHVGCHPAVAFMAQVLFAAST 176
              :| || |:|:  || |||||:|   ||  |:||| ||:|| | |||||: :||: : |
Db        114 --KEHEVSYDAVMSVLAYLYSGKVRPSPKDVCVCVDNDCSHVACRPAVAFLVEVLYTSFT 171

Qy        177 FQVAELTNLFQRRLLDVLDKVEVDNLLLILSVANLCNKSCMKLLERCLDMVVRSNLDMIT 236
              ||::|| : ||| |||:|||   |:::::|||||:| |:| :||  |::::|:||:|:||
Db        172 FQISELVDKFQRHLLDILDKTAADDVMMVLSVANICGKACERLLSSCIEIIVKSNVDIIT 231

Qy        237 LEKSLPPDVIKQIIDARLSLGLISPENKGFPNKHVRRIHRALDSDDVELVRMLLTEGQTN 296
              |:|:|| |::||| |:|  |||  ||: |||:|||:|||||||||||||::||| || |
Db        232 LDKALPHDIVKQITDSRAELGLQGPESNGFPDKHVKRIHRALDSDDVELLQMLLREGHTT 291

Qy        297 LDDAFALHYAVEHCDSKITTELLDLALADVNHRNPRGYTVLHIAARRREPKIIVSLLTKG 356
              ||||:|||||| :||:| | |||||||||:||:| |||||||:|| |:||||:|||||||
Db        292 LDDAYALHYAVAYCDAKTTAELLDLALADINHQNSRGYTVLHVAAMRKEPKIVVSLLTKG 351

Qy        357 ARPADVTFDGRKAVQISKRLTKQGDYFGVTEEGKPSPKDRLCIEILEQAERRDPQLGEAS 416
              |||:|:| |||||:||:||||:  |:    |||| :  |||||||||||||| |||||
Db        352 ARPSDLTSDGRKALQIAKRLTRLVDFSKSPEEGKSASNDRLCIEILEQAERRDPLLGEAS 411

Qy        417 VSLAMAGESLRGRLLYLENRVALARIMFPMEARVAMDIAQVDGTLEFNLGSGANPPPERQ 476
              |||||||: || :|||||||| ||:::|||||:|||||||||| || | |          |
Db        412 VSLAMAGDDLRMKLLYLENRVGLAKLLFPMEAKVAMDIAQVDGTSEFPLASIGKKMANAQ 471

Qy        477 RTTVDLNESPFIMKEEHLARMTALSKTVELGKRFFPRCSNVLDKIM--DDETDPVSLGRD 534
              ||||||||:|| :||||| |: |||:||||||||||||| ||:|||  || ::   :| |
Db        472 RTTVDLNEAPFKIKEEHLNRLRALSRTVELGKRFFPRCSEVLNKIMDADDLSEIAYMGND 531

Qy        535 TSAE---KRKRFHDLQDVLQKAFHEDKEENDR-SGLSSSSSSTSIGAIRPRR 582
              |: |   |::|: :||::| ||| ||||| |: : :||| |||| |  :| :
Db        532 TAEERQLKKQRYMELQEILTKAFTEDKEEYDKTNNISSSCSSTSKGVDKPNK 583
```

```
RESULT 5
US-10-328-675A-2
; Sequence 2, Application US/10328675A
; Publication No. US20030159171A1
; GENERAL INFORMATION:
;  APPLICANT: Salmeron, John
;  APPLICANT:  Weislo, Laura
;  APPLICANT:  Willits, Michael
;  TITLE OF INVENTION: NOVEL PLANT GENES AND USES THEREOF
;  FILE REFERENCE: 30857USNPDIV1
;  CURRENT APPLICATION NUMBER: US/10/328,675A
;  CURRENT FILING DATE:  2002-12-23
;  PRIOR APPLICATION NUMBER: 09/519,232
;  PRIOR FILING DATE: 2000-03-06
;  PRIOR APPLICATION NUMBER: 60/219,338
;  PRIOR FILING DATE: 1999-03-09
;  NUMBER OF SEQ ID NOS: 74
;  SOFTWARE: PatentIn Ver. 2.1
; SEQ ID NO 2
;   LENGTH: 588
;   TYPE: PRT
;   ORGANISM: Nicotiana tabacum
US-10-328-675A-2

  Query Match            56.7%;  Score 1672.5;  DB 12;  Length 588;
  Best Local Similarity  56.8%;  Pred. No. 2.2e-145;
  Matches  336;  Conservative  102;  Mismatches  119;  Indels   35;  Gaps    8;

Qy         11 AFSDSDSASVEE-------------GDADADADVEALRRLSDNLAAAF-RSPEDFAFLAD 56
Db          7 AFSDSNDISGSSSICCIGGGMTEFFSPETSPAEITSLKRLSETLESIFDASLPEFDYFAD 66

Qy         57 ARIAVPGGGGGGGDLRVHRCVLSARSPFLRGVFARRAAAAAGGGGEDGSERLELRELLGG 116
Db         67 AKLVV---SGPCKEIPVHRCILSARSPFFKNLFC--------GKKEKNSSKVELKEVM-- 113

Qy        117 GGEEVEVGYEALRLVLDYLYSGRVGDLPKAACLCVDEDCAHVGCHPAVAFMAQVLFAAST 176
Db        114 --KEHEVSYDAVMSVLAYLYSGKVRPSPKDVCVCVDNDCSHVACRPAVAFLVEVLYTSFT 171

Qy        177 FQVAELTNLFQRRLLDVLDKVEVDNLLLILSVANLCNKSCMKLLERCLDMVVRSNLDMIT 236
Db        172 FQISELVDKFQRHLLDILDKTAADDVMMVLSVANICGKACERLLSSCIEIIVKSNVDIIT 231

Qy        237 LEKSLPPDVIKQIIDARLSLGLISPENKGFPNKHVRRIHRALDSDDVELVRMLLTEGQTN 296
Db        232 LDKALPHDIVKQITDSRAELGLQGPESNGFPDKHVKRIHRALDSDDVELLQMLLREGHTT 291

Qy        297 LDDAFALHYAVEHCDSKITTELLDLALADVNHRNPRGYTVLHIAARRREPKIIVSLLTKG 356
Db        292 LDDAYALHYAVAYCDAKTTAELLDLALADINHQNSRGYTVLHVAAMRKEPKIVVSLLTKG 351

Qy        357 ARPADVTFDGRKAVQISKRLTKQGDYFGVTEEGKPSPKDRLCIEILEQAERRDPQLGEAS 416
Db        352 ARPSDLTSDGRKALQIAKRLTRLVDFSKSPEEGKSASNDRLCIEILEQAERRDPLLGEAS 411

Qy        417 VSLAMAGESLRGRLLYLENRVALARIMFPMEARVAMDIAQVDGTLEFNLGSGANPPPERQ 476
Db        412 VSLAMAGDDLRMKLLYLENRVGLAKLLFPMEAKVAMDIAQVDGTSEFPLASIGKKMANAQ 471

Qy        477 RTTVDLNESPFIMKEEHLARMTALSKTVELGKRFFPRCSNVLDKIM--DDETDPVSLGRD 534
Db        472 RTTVDLNEAPFKIKEEHLNRLRALSRTVELGKRFFPRCSEVLNKIMDADDLSEIAYMGND 531

Qy        535 TSAE---KRKRFHDLQDVLQKAFHEDKEENDR-SGLSSSSSSTSIGAIRPRR 582
Db        532 TAEERQLKKQRYMELQEILTKAFTEDKEEYDKTNNISSSCSSTSKGVDKPNK 583


RESULT 6
US-10-328-675A-64
; Sequence 64, Application US/10328675A
; Publication No. US20030159171A1
; GENERAL INFORMATION:
;  APPLICANT: Salmeron, John
;  APPLICANT:  Weislo, Laura
;  APPLICANT:  Willits, Michael
;  TITLE OF INVENTION: NOVEL PLANT GENES AND USES THEREOF
;  FILE REFERENCE: 30857USNPDIV1
;  CURRENT APPLICATION NUMBER: US/10/328,675A
;  CURRENT FILING DATE:  2002-12-23
;  PRIOR APPLICATION NUMBER: 09/519,232
;  PRIOR FILING DATE: 2000-03-06
;  PRIOR APPLICATION NUMBER: 60/219,338
;  PRIOR FILING DATE: 1999-03-09
;  NUMBER OF SEQ ID NOS: 74
;  SOFTWARE: PatentIn Ver. 2.1
; SEQ ID NO 64
;   LENGTH: 604
;   TYPE: PRT
;   ORGANISM: Beta vulgaris
US-10-328-675A-64

  Query Match            55.2%;  Score 1629;  DB 12;  Length 604;
  Best Local Similarity  57.4%;  Pred. No. 2.3e-141;
  Matches  343;  Conservative   81;  Mismatches  130;  Indels   44;  Gaps   10;

Qy         11 AFSDSDSAS----------------VEEGDADADADVEALRRLSDNLAAAFR---SPED 50
Db         15 AFSDSNDISNGSSICCVAATTTTTTTAAENSLSFTPDAAALLRLSENLDSLFQPSLSLSD 74

Qy         51 FAFLADARIAVPGGGGGGGDLRVHRCVLSARSPFLRGVFARRAAAAAGGGGEDGSER--- 107
Db         75 SDSFADAKIVV---SGDSREVAVHRCVLSSRSSFFRSAFASKREKEK----ERDKERVVK 127

Qy        108 LELRELLGGGGEEVEVGYEALRLVLDYLYSGRVGDLPKAACLCVDEDCAHVGCHPAVAFM 167
Db        128 LELKDLAG----DFEVGFDSVVAVLGYLYSGKVRNLPRGICVCVDEDCSHEACRPAVDFV 183

Qy        168 AQVLFAASTFQVAELTNLFQRRLLDVLDKVEVDNLLLILSVANLCNKSCMKLLERCLDMV 227
Db        184 VEVLYLSHKFEIVELVSLYQRHLLDILDKIAPDDVLVVLSVAEMCGNACDGLLARCIDKI 243

Qy        228 VRSNLDMITLEKSLPPDVIKQIIDARLSLGLISPENKGFPNKHVRRIHRALDSDDVELVR 287
Db        244 VRSDIDVTTIDKSLPQNVVKQIIDTRKELGFTEPGRVEFPDKHVKRIHRALESDDVELVR 303

Qy        288 MLLTEGQTNLDDAFALHYAVEHCDSKITTELLDLALADVNHRNPRGYTVLHIAARRREPK 347
Db        304 MLLKERHTTLDDAYALHYAVAHCDAKTTTELLELGLADVNLRNLRGHTVLHVAAMRKEPK 363

Qy        348 IIVSLLTKGARPADVTFDGRKAVQISKRLTKQGDYFGVTEEGKPSPKDRLCIEILEQAER 407
Db        364 IIVSLLTKGAHPSDITSDDKKALQIAKRLTKAVDFYKTTEQGKDAPKDRLCIEILEQAER 423

Qy        408 RDPQLGEASVSLAMAGESLRGRLLYLENRVALARIMFPMEARVAMDIAQVDGTLEFNLGS 467
Db        424 REPLLGEGSVSLAKAGDDLRMKLLYLENRVALARLLFPMEAKVAMDIAQVDGTSEFTLSK 483

Qy        468 GANPPPERQRTTVDLNESPFIMKEEHLARMTALSKTVELGKRFFPRCSNVLDKIMD--DE 525
Db        484 NI---ADARRNAVDLNEAPFILKEEHLQRMKALSKTVELGKRFFPRCSDVLNKIMDAEDL 540

Qy        526 TDPVSLGRDTSAE---KRKRFHDLQDVLQKAFHEDKEENDRSGLSSSSSSTSIGAIRP 580
Db        541 SQLAFLGKDTPEERQRKRKRYLELQDALTKAFTEDKEEFDRSTLSSSSSSTPMG--RP 596


RESULT 7
US-08-908-884-3
; Sequence 3, Application US/08908884
; Publication No. US20020138872A1
;  GENERAL INFORMATION:
;    APPLICANT:  Dong et al.
;    TITLE OF INVENTION:  ACQUIRED RESISTANCE GENES AND USES THEREOF
```

```
;    NUMBER OF SEQUENCES:  28
;    CORRESPONDENCE ADDRESS:
;      ADDRESSEE:  Clark & Elbing LLP
;      STREET:  176 Federal Street
;      CITY:  Boston
;      STATE:  MA
;      COUNTRY:  USA
;      ZIP:  02110
;    COMPUTER READABLE FORM:
;      MEDIUM TYPE:  Diskette
;      COMPUTER:  IBM Compatible
;      OPERATING SYSTEM:  DOS
;      SOFTWARE:  FastSEQ for Windows Version 2.0
;    CURRENT APPLICATION DATA:
;      APPLICATION NUMBER:  US/08/908,884
;      FILING DATE:
;      CLASSIFICATION:  800
;    PRIOR APPLICATION DATA:
;      APPLICATION NUMBER:  60/023,851
;      FILING DATE:  August 9, 1996
;      APPLICATION NUMBER:  60/035,166
;      FILING DATE:  January 10, 1997
;      APPLICATION NUMBER:  60/046,769
;      FILING DATE:  May 16, 1997
;    ATTORNEY/AGENT INFORMATION:
;      NAME:  Elbing, Karen L
;      REGISTRATION NUMBER:  35,238
;      REFERENCE/DOCKET NUMBER:  00786/339004
;    TELECOMMUNICATION INFORMATION:
;      TELEPHONE:  617-428-0200
;      TELEFAX:  617-428-7045
;  INFORMATION FOR SEQ ID NO:  3:
;    SEQUENCE CHARACTERISTICS:
;      LENGTH:  593 amino acids
;      TYPE:  amino acid
;      STRANDEDNESS:  single
;      TOPOLOGY:  linear
;    MOLECULE TYPE:  protein
US-08-908-884-3

  Query Match             43.2%;  Score 1276;  DB 8;  Length 593;
  Best Local Similarity   47.2%;  Pred. No. 8.7e-109;
  Matches  273;  Conservative  113;  Mismatches  165;  Indels   28;  Gaps    9;

Qy          5 TSHVTNAFSDSDSASVEEGDADADADVEALRRLSDNLAAAFRSPEDFAFLADARIAVPGG 64
              || |    :||    :          || ||: ||::  : | ||:|  | :||:: :
Db         17 TSFVATDNTDSSIVYLAAEQVLTGPDVSALQLLSNSFESVFDSPDD--FYSDAKLVL--- 71

Qy         65 GGGGGDLRVHRCVLSARSPFLRGVFARRAAAAAGGGGEDGSERLELRELLGGGGEEVEVG 124
                | ::  ||||||||| | :   |  ||          : :|||:|:     :: |||
Db         72 -SDGREVSFHRCVLSARSSFFKSALA--AAKKEKDSNNTAAVKLELKEI----AKDYEVG 124

Qy        125 YEALRLVLDYLYSGRVGDLPKAACLCVDEDCAHVGCHPAVAFMAQVLFAASTFQVAELTN 184
              ::::  || |:|| ||   ||    | ||:| || | ||| || :||: |  |:: ||
Db        125 FDSVVTVLAYVYSSRVRPPPKGVSECADENCCHVACRPAVDFMLEVLYLAFIFKIPELIT 184

Qy        185 LFQRRLLDVLDKVEVDNLLLILSVANLCNKSCMKLLERCLDMVVRSNLDMITLEKSLPPD 244
              |:|| ||||:||| ::: |:|| :||:| |:|||||:|| :::|:||:||::|||||| :
Db        185 LYQRHLLDVVDKVVIEDTLVILKLANICGKACMKLLDRCKEIIVKSNVDMVSLEKSLPEE 244

Qy        245 VIKQIIDARLSLGLISPENKGFPNKHVRRIHRALDSDDVELVRMLLTEGQTNLDDAFALH 304
              ::|:||| |  |||  |: |    |||  :|:||||||:|||::|| |  |||||| |||
Db        245 LVKEIIDRRKELGLEVPKVK----KHVSNVHKALDSDDIELVKLLLKEDHTNLDDACALH 300

Qy        305 YAVEHCDSKITTELLDLALADVNHRNPRGYTVLHIAARRREPKIIVSLLTKGARPADVTF 364
              :|| :|: |  |:|| | ||||||||||||||||:|| |:||::|:||| |||  :: |
Db        301 FAVAYCNVKTATDLLKLDLADVNHRNPRGYTVLHVAAMRKEPQLILSLLEKGASASEATL 360

Qy        365 DGRKAVQISKRLTKQGDYFGVTEEGKPSPKDRLCIEILEQAERRDPQLGEASVSLAMAGE 424
              :|| |: |:|: |   :   : |: | | |||:|||| ::|:    :  | |:| :
Db        361 EGRTALMIAKQATMAVECNNIPEQCKHSLKGRLCVEILEQEDKREQIPRDVPPSFAVAAD 420

Qy        425 SLRGRLLYLENRVALARIMFPMEARVAMDIAQVDGTLEFNLGSGANPPPER----QRTTV 480
                |:  || |||||||: :|| ||: ||:||:: || || : |     |:|    :||:
Db        421 ELKMTLLDLENRVALAQRLFPTEAQAAMEIAEMKGTCEFIVTS---LEPDRLTGTKRTSP 477

Qy        481 DLNESPFIMKEEHLARMTALSKTVELGKRFFPRCSNVLDKIMD-DETDPVSLGRDTSAEK 539
              :  :|| : ||| :|: |||||||||||||||| |||:||: ::   :: | | :|||
Db        478 GVKIAPFRILEEHQSRLKALSKTVELGKRFFPRCSAVLDQIMNCEDLTQLACGEDDTAEK 537

Qy        540 R----KRFHDLQDVLQKAFHEDKEENDRSGLSSSSSSTS 574
              |    :|: ::|: |:||| ||  |   | |: |:|||
Db        538 RLQKKQRYMEIQETLKKAFSEDNLELGNSSLTDSTSSTS 576


RESULT 8
US-09-908-323-3
; Sequence 3, Application US/09908323
; Patent No. US20020073447A1
;  GENERAL INFORMATION:
;       APPLICANT: Dong et al.
;       TITLE OF INVENTION: ACQUIRED RESISTANCE GENES AND USES THEREOF
;       NUMBER OF SEQUENCES: 28
;       CORRESPONDENCE ADDRESS:
;            ADDRESSEE: Clark & Elbing LLP
;            STREET: 176 Federal Street
;            CITY: Boston
;            STATE: MA
;            COUNTRY: USA
;            ZIP: 02110
;       COMPUTER READABLE FORM:
;            MEDIUM TYPE: Diskette
;            COMPUTER: IBM Compatible
;            OPERATING SYSTEM: DOS
;            SOFTWARE: FastSEQ for Windows Version 2.0
;       CURRENT APPLICATION DATA:
;            APPLICATION NUMBER: US/09/908,323
;            FILING DATE: 17-Jul-2001
;            CLASSIFICATION: <Unknown>
;       PRIOR APPLICATION DATA:
;            APPLICATION NUMBER: 08/908,884
;            FILING DATE: <Unknown>
;            APPLICATION NUMBER: 60/035,166
;            FILING DATE: January 10, 1997
;            APPLICATION NUMBER: 60/046,769
;            FILING DATE: May 16, 1997
;       ATTORNEY/AGENT INFORMATION:
;            NAME: Elbing, Karen L
;            REGISTRATION NUMBER: 35,238
;            REFERENCE/DOCKET NUMBER: 00786/339004
;       TELECOMMUNICATION INFORMATION:
;            TELEPHONE: 617-428-0200
;            TELEFAX: 617-428-7045
;  INFORMATION FOR SEQ ID NO: 3:
;       SEQUENCE CHARACTERISTICS:
;            LENGTH: 593 amino acids
;            TYPE: amino acid
;            STRANDEDNESS: single
;            TOPOLOGY: linear
;       MOLECULE TYPE: protein
;       SEQUENCE DESCRIPTION: SEQ ID NO: 3:
US-09-908-323-3

  Query Match             43.2%;  Score 1276;  DB 9;  Length 593;
  Best Local Similarity   47.2%;  Pred. No. 8.7e-109;
  Matches  273;  Conservative  113;  Mismatches  165;  Indels   28;  Gaps    9;

Qy          5 TSHVTNAFSDSDSASVEEGDADADADVEALRRLSDNLAAAFRSPEDFAFLADARIAVPGG 64
              || |    :||    :          || ||: ||::  : | ||:|  | :||:: :
Db         17 TSFVATDNTDSSIVYLAAEQVLTGPDVSALQLLSNSFESVFDSPDD--FYSDAKLVL--- 71

Qy         65 GGGGGDLRVHRCVLSARSPFLRGVFARRAAAAAGGGGEDGSERLELRELLGGGGEEVEVG 124
                | ::  ||||||||| | :   |  ||          : :|||:|:     :: |||
Db         72 -SDGREVSFHRCVLSARSSFFKSALA--AAKKEKDSNNTAAVKLELKEI----AKDYEVG 124

Qy        125 YEALRLVLDYLYSGRVGDLPKAACLCVDEDCAHVGCHPAVAFMAQVLFAASTFQVAELTN 184
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Db        125 FDSVVTVLAYVYSSRVRPPPKGVSECADENCCHVACRPAVDFMLEVLYLAFIFKIPELIT 184

Qy        185 LFQRRLLDVLDKVEVDNLLLILSVANLCNKSCMKLLERCLDMVVRSNLDMITLEKSLPPD 244

Db        185 LYQRHLLDVVDKVVIEDTLVILKLANICGKACMKLLDRCKEIIVKSNVDMVSLEKSLPEE 244

Qy        245 VIKQIIDARLSLGLISPENKGFPNKHVRRIHRALDSDDVELVRMLLTEGQTNLDDAFALH 304

Db        245 LVKEIIDRRKELGLEVPKVK----KHVSNVHKALDSDDIELVKLLLKEDHTNLDDACALH 300

Qy        305 YAVEHCDSKITTELLDLALADVNHRNPRGYTVLHIAARRREPKIIVSLLTKGARPADVTF 364

Db        301 FAVAYCNVKTATDLLKLDLADVNHRNPRGYTVLHVAAMRKEPQLILSLLEKGASASEATL 360

Qy        365 DGRKAVQISKRLTKQGDYFGVTEEGKPSPKDRLCIEILEQAERRDPQLGEASVSLAMAGE 424

Db        361 EGRTALMIAKQATMAVECNNIPEQCKHSLKGRLCVEILEQEDKREQIPRDVPPSFAVAAD 420

Qy        425 SLRGRLLYLENRVALARIMFPMEARVAMDIAQVDGTLEFNLGSGANPPPER----QRTTV 480

Db        421 ELKMTLLDLENRVALAQRLFPTEAQAAMEIAEMKGTCEFIVTS---LEPDRLTGTKRTSP 477

Qy        481 DLNESPFIMKEEHLARMTALSKTVELGKRFFPRCSNVLDKIMD-DETDPVSLGRDTSAEK 539

Db        478 GVKIAPFRILEEHQSRLKALSKTVELGKRFFPRCSAVLDQIMNCEDLTQLACGEDDTAEK 537

Qy        540 R----KRFHDLQDVLQKAFHEDKEENDRSGLSSSSSSTS 574

Db        538 RLQKKQRYMEIQETLKKAFSEDNLELGNSSLTDSTSSTS 576
```

RESULT 9
US-09-934-455-74
; Sequence 74, Application US/09934455
; Publication No. US20030121070A1
; GENERAL INFORMATION:
; APPLICANT: Adam, Luc
; APPLICANT: Creelman, Robert
; APPLICANT: Dubell, Arnold
; APPLICANT: Heard, Jacqueline
; APPLICANT: Jiang, Cai-Zhong
; APPLICANT: Keddie, James
; APPLICANT: Pilgrim, Marsha
; APPLICANT: Ratcliffe, Oliver
; APPLICANT: Reuber, Lynne
; APPLICANT: Riechmann, Jose Luis
; APPLICANT: Yu, Guo-Liang
; APPLICANT: Pineda, Omaira
; TITLE OF INVENTION: Genes for Modifying Plant Traits IV
; FILE REFERENCE: MBI-0025
; CURRENT APPLICATION NUMBER: US/09/934,455
; CURRENT FILING DATE: 2001-08-22
; PRIOR APPLICATION NUMBER: 60/227439
; PRIOR FILING DATE: 2000-08-22
; PRIOR APPLICATION NUMBER: MBI-0022
; PRIOR FILING DATE: 2001-11-16
; PRIOR APPLICATION NUMBER: MBI-0023
; PRIOR FILING DATE: 2001-04-17
; NUMBER OF SEQ ID NOS: 516
; SOFTWARE: PatentIn version 3.1
; SEQ ID NO 74
; LENGTH: 593
; TYPE: PRT
; ORGANISM: Arabidopsis thaliana
US-09-934-455-74

Query Match 43.2%; Score 1276; DB 11; Length 593;
Best Local Similarity 47.2%; Pred. No. 8.7e-109;
Matches 273; Conservative 113; Mismatches 165; Indels 28; Gaps 9;

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Qy          5 TSHVTNAFSDSDSASVEEGDADADADVEALRRLSDNLAAAFRSPEDFAFLADARIAVPGG 64

Db         17 TSFVATDNTDSSIVYLAAEQVLTGPDVSALQLLSNSFESVFDSPDD--FYSDAKLVL--- 71

Qy         65 GGGGGDLRVHRCVLSARSPFLRGVFARRAAAAAGGGGEDGSERLELRELLGGGGEEVEVG 124

Db         72 -SDGREVSFHRCVLSARSSFFKSALA--AAKKEKDSNNTAAVKLELKEI----AKDYEVG 124

Qy        125 YEALRLVLDYLYSGRVGDLPKAACLCVDEDCAHVGCHPAVAFMAQVLFAASTFQVAELTN 184

Db        125 FDSVVTVLAYVYSSRVRPPPKGVSECADENCCHVACRPAVDFMLEVLYLAFIFKIPELIT 184

Qy        185 LFQRRLLDVLDKVEVDNLLLILSVANLCNKSCMKLLERCLDMVVRSNLDMITLEKSLPPD 244

Db        185 LYQRHLLDVVDKVVIEDTLVILKLANICGKACMKLLDRCKEIIVKSNVDMVSLEKSLPEE 244

Qy        245 VIKQIIDARLSLGLISPENKGFPNKHVRRIHRALDSDDVELVRMLLTEGQTNLDDAFALH 304

Db        245 LVKEIIDRRKELGLEVPKVK----KHVSNVHKALDSDDIELVKLLLKEDHTNLDDACALH 300

Qy        305 YAVEHCDSKITTELLDLALADVNHRNPRGYTVLHIAARRREPKIIVSLLTKGARPADVTF 364

Db        301 FAVAYCNVKTATDLLKLDLADVNHRNPRGYTVLHVAAMRKEPQLILSLLEKGASASEATL 360

Qy        365 DGRKAVQISKRLTKQGDYFGVTEEGKPSPKDRLCIEILEQAERRDPQLGEASVSLAMAGE 424

Db        361 EGRTALMIAKQATMAVECNNIPEQCKHSLKGRLCVEILEQEDKREQIPRDVPPSFAVAAD 420

Qy        425 SLRGRLLYLENRVALARIMFPMEARVAMDIAQVDGTLEFNLGSGANPPPER----QRTTV 480

Db        421 ELKMTLLDLENRVALAQRLFPTEAQAAMEIAEMKGTCEFIVTS---LEPDRLTGTKRTSP 477

Qy        481 DLNESPFIMKEEHLARMTALSKTVELGKRFFPRCSNVLDKIMD-DETDPVSLGRDTSAEK 539

Db        478 GVKIAPFRILEEHQSRLKALSKTVELGKRFFPRCSAVLDQIMNCEDLTQLACGEDDTAEK 537

Qy        540 R----KRFHDLQDVLQKAFHEDKEENDRSGLSSSSSSTS 574

Db        538 RLQKKQRYMEIQETLKKAFSEDNLELGNSSLTDSTSSTS 576
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RESULT 10
US-09-848-841-17
; Sequence 17, Application US/09848841
; Publication No. US20030172411A1
; GENERAL INFORMATION:
; APPLICANT: E. I. du Pont de Nemours and Company
; APPLICANT: Butler, Karla
; APPLICANT: Falco, Carl
; APPLICANT: Famodu, Omolayo O.
; APPLICANT: Fang, Yiwen
; APPLICANT: Han, Feng
; APPLICANT: Heppard, Elmer
; APPLICANT: Liu, Zhan-Bin
; APPLICANT: Miao, Gou-Hau
; APPLICANT: Odell, Joan
; APPLICANT: Rafalski, Antoni
; TITLE OF INVENTION: Disease Resistance Factors
; FILE REFERENCE: BB1252 US NA1
; CURRENT APPLICATION NUMBER: US/09/848,841
; CURRENT FILING DATE: 2001-05-04
; PRIOR APPLICATION NUMBER: 60/107,242
; PRIOR FILING DATE: 1998-11-05
; PRIOR APPLICATION NUMBER: US99/25,953
; PRIOR FILING DATE: 1999-10-04
; NUMBER OF SEQ ID NOS: 17
; SOFTWARE: Microsoft Office 97
; SEQ ID NO 17
; LENGTH: 593
; TYPE: PRT
; ORGANISM: Arabidopsis thaliana
US-09-848-841-17

Query Match 43.2%; Score 1276; DB 12; Length 593;
Best Local Similarity 47.2%; Pred. No. 8.7e-109;

```
  Matches  273;  Conservative  113;  Mismatches  165;  Indels   28;  Gaps    9;

Qy          5 TSHVTNAFSDSDSASVEEGDADADADVEALRRLSDNLAAAFRSPEDFAFLADARIAVPGG 64
              || |    :||    :          || ||: ||::  : | ||:|  | :||:: :
Db         17 TSFVATDNTDSSIVYLAAEQVLTGPDVSALQLLSNSFESVFDSPDD--FYSDAKLVL--- 71

Qy         65 GGGGGDLRVHRCVLSARSPFLRGVFARRAAAAAGGGGEDGSERLELRELLGGGGEEVEVG 124
                | ::  ||||||||| | :   |  ||          : :|||:|:     :: |||
Db         72 -SDGREVSFHRCVLSARSSFFKSALA--AAKKEKDSNNTAAVKLELKEI----AKDYEVG 124

Qy        125 YEALRLVLDYLYSGRVGDLPKAACLCVDEDCAHVGCHPAVAFMAQVLFAASTFQVAELTN 184
              ::::  || |:|| ||   ||    | ||:| || | ||| || :||: |  |:: ||
Db        125 FDSVVTVLAYVYSSRVRPPPKGVSECADENCCHVACRPAVDFMLEVLYLAFIFKIPELIT 184

Qy        185 LFQRRLLDVLDKVEVDNLLLILSVANLCNKSCMKLLERCLDMVVRSNLDMITLEKSLPPD 244
              |:|| ||||:||| ::: |:|| :||:| |:|||||:|| :::|:||:||::|||||| :
Db        185 LYQRHLLDVVDKVVIEDTLVILKLANICGKACMKLLDRCKEIIVKSNVDMVSLEKSLPEE 244

Qy        245 VIKQIIDARLSLGLISPENKGFPNKHVRRIHRALDSDDVELVRMLLTEGQTNLDDAFALH 304
              ::|:||| |  |||  |: |    |||  :|:||||||:|||::|| |  |||||| |||
Db        245 LVKEIIDRRKELGLEVPKVK----KHVSNVHKALDSDDIELVKLLLKEDHTNLDDACALH 300

Qy        305 YAVEHCDSKITTELLDLALADVNHRNPRGYTVLHIAARRREPKIIVSLLTKGARPADVTF 364
              :|| :|: |  |:|| | |||||||||||||||||:|| |:||::|:||| |||  :: |
Db        301 FAVAYCNVKTATDLLKLDLADVNHRNPRGYTVLHVAAMRKEPQLILSLLEKGASASEATL 360

Qy        365 DGRKAVQISKRLTKQGDYFGVTEEGKPSPKDRLCIEILEQAERRDPQLGEASVSLAMAGE 424
              :|| |: |:|: |   :  : |: | | | |||:||||| ::|:    :   | |:| :
Db        361 EGRTALMIAKQATMAVECNNIPEQCKHSLKGRLCVEILEQEDKREQIPRDVPPSFAVAAD 420

Qy        425 SLRGRLLYLENRVALARIMFPMEARVAMDIAQVDGTLEFNLGSGANPPPER----QRTTV 480
              |:  || |||||||: :|| ||: ||:||:: || || : |     |:|    :||:
Db        421 ELKMTLLDLENRVALAQRLFPTEAQAAMEIAEMKGTCEFIVTS---LEPDRLTGTKRTSP 477

Qy        481 DLNESPFIMKEEHLARMTALSKTVELGKRFFPRCSNVLDKIMD-DETDPVSLGRDTSAEK 539
              :  :|| : ||| :|: |||||||||||||||||| |||:||: ::   :: | | :|||
Db        478 GVKIAPFRILEEHQSRLKALSKTVELGKRFFPRCSAVLDQIMNCEDLTQLACGEDDTAEK 537

Qy        540 R----KRFHDLQDVLQKAFHEDKEENDRSGLSSSSSSTS 574
              |    :|: ::|: |:||| ||  |   | |: |:|||
Db        538 RLQKKQRYMEIQETLKKAFSEDNLELGNSSLTDSTSSTS 576


RESULT 11
US-10-225-068-242
; Sequence 242, Application US/10225068
; Publication No. US20030217383A1
; GENERAL INFORMATION:
;  APPLICANT: Mendel Biotechnology, Inc.
;  APPLICANT:  Reuber, T. Lynne
;  APPLICANT:  Riechmann, Jose Luis
;  APPLICANT:  Heard, Jacqueline E.
;  APPLICANT:  Jiang, Cai-Zhong
;  APPLICANT:  Adam, Luc J.
;  APPLICANT:  Dubell, Arnold T.
;  APPLICANT:  Ratcliffe, Oliver
;  APPLICANT:  Pineda, Omaira
;  APPLICANT:  Yu, Guo-Liang
;  APPLICANT:  Broun, Pierre E.
;  TITLE OF INVENTION: STRESS-RELATED POLYNUCLEOTIDES AND
;  TITLE OF INVENTION:  POLYPEPTIDES IN PLANTS
;  FILE REFERENCE: 514442002040
;  CURRENT APPLICATION NUMBER: US/10/225,068
;  CURRENT FILING DATE:  2002-08-09
;  PRIOR APPLICATION NUMBER: 60/310,847
;  PRIOR FILING DATE: 2001-08-09
;  PRIOR APPLICATION NUMBER: 60/336,049
;  PRIOR FILING DATE: 2001-11-19
;  PRIOR APPLICATION NUMBER: 60/338,692
;  PRIOR FILING DATE: 2001-12-11
;  PRIOR APPLICATION NUMBER: 10/171,468
;  PRIOR FILING DATE: 2002-06-14
;  NUMBER OF SEQ ID NOS: 246
;  SOFTWARE: FastSEQ for Windows Version 4.0
; SEQ ID NO 242
;   LENGTH: 593
;   TYPE: PRT
;   ORGANISM: Arabidopsis thaliana
;   FEATURE:
;   NAME/KEY: DOMAIN
;   LOCATION: (2)...(593)
;   OTHER INFORMATION: Conserved domain
US-10-225-068-242

  Query Match           43.2%;  Score 1276;  DB 12;  Length 593;
  Best Local Similarity   47.2%;  Pred. No. 8.7e-109;
  Matches  273;  Conservative  113;  Mismatches  165;  Indels   28;  Gaps    9;

Qy          5 TSHVTNAFSDSDSASVEEGDADADADVEALRRLSDNLAAAFRSPEDFAFLADARIAVPGG 64
              || |    :||    :          || ||: ||::  : | ||:|  | :||:: :
Db         17 TSFVATDNTDSSIVYLAAEQVLTGPDVSALQLLSNSFESVFDSPDD--FYSDAKLVL--- 71

Qy         65 GGGGGDLRVHRCVLSARSPFLRGVFARRAAAAAGGGGEDGSERLELRELLGGGGEEVEVG 124
                | ::  ||||||||| | :   |  ||          : :|||:|:     :: |||
Db         72 -SDGREVSFHRCVLSARSSFFKSALA--AAKKEKDSNNTAAVKLELKEI----AKDYEVG 124

Qy        125 YEALRLVLDYLYSGRVGDLPKAACLCVDEDCAHVGCHPAVAFMAQVLFAASTFQVAELTN 184
              ::::  || |:|| ||   ||    | ||:| || | ||| || :||: |  |:: ||
Db        125 FDSVVTVLAYVYSSRVRPPPKGVSECADENCCHVACRPAVDFMLEVLYLAFIFKIPELIT 184

Qy        185 LFQRRLLDVLDKVEVDNLLLILSVANLCNKSCMKLLERCLDMVVRSNLDMITLEKSLPPD 244
              |:|| ||||:||| ::: |:|| :||:| |:|||||:|| :::|:||:||::|||||| :
Db        185 LYQRHLLDVVDKVVIEDTLVILKLANICGKACMKLLDRCKEIIVKSNVDMVSLEKSLPEE 244

Qy        245 VIKQIIDARLSLGLISPENKGFPNKHVRRIHRALDSDDVELVRMLLTEGQTNLDDAFALH 304
              ::|:||| |  |||  |: |    |||  :|:||||||:|||::|| |  |||||| |||
Db        245 LVKEIIDRRKELGLEVPKVK----KHVSNVHKALDSDDIELVKLLLKEDHTNLDDACALH 300

Qy        305 YAVEHCDSKITTELLDLALADVNHRNPRGYTVLHIAARRREPKIIVSLLTKGARPADVTF 364
              :|| :|: |  |:|| | |||||||||||||||||:|| |:||::|:||| |||  :: |
Db        301 FAVAYCNVKTATDLLKLDLADVNHRNPRGYTVLHVAAMRKEPQLILSLLEKGASASEATL 360

Qy        365 DGRKAVQISKRLTKQGDYFGVTEEGKPSPKDRLCIEILEQAERRDPQLGEASVSLAMAGE 424
              :|| |: |:|: |   :  : |: | | | |||:||||| ::|:    :   | |:| :
Db        361 EGRTALMIAKQATMAVECNNIPEQCKHSLKGRLCVEILEQEDKREQIPRDVPPSFAVAAD 420

Qy        425 SLRGRLLYLENRVALARIMFPMEARVAMDIAQVDGTLEFNLGSGANPPPER----QRTTV 480
              |:  || |||||||: :|| ||: ||:||:: || || : |     |:|    :||:
Db        421 ELKMTLLDLENRVALAQRLFPTEAQAAMEIAEMKGTCEFIVTS---LEPDRLTGTKRTSP 477

Qy        481 DLNESPFIMKEEHLARMTALSKTVELGKRFFPRCSNVLDKIMD-DETDPVSLGRDTSAEK 539
              :  :|| : ||| :|: |||||||||||||||||| |||:||: ::   :: | | :|||
Db        478 GVKIAPFRILEEHQSRLKALSKTVELGKRFFPRCSAVLDQIMNCEDLTQLACGEDDTAEK 537

Qy        540 R----KRFHDLQDVLQKAFHEDKEENDRSGLSSSSSSTS 574
              |    :|: ::|: |:||| ||  |   | |: |:|||
Db        538 RLQKKQRYMEIQETLKKAFSEDNLELGNSSLTDSTSSTS 576


RESULT 12
US-10-079-035-3
; Sequence 3, Application US/10079035
; Publication No. US20020152499A1
;  GENERAL INFORMATION:
;    APPLICANT:  Ryals, John
;    APPLICANT:  Delaney, Terry
;    APPLICANT:  Friedrich, Leslie
;    APPLICANT:  Weymann, Kristianna
;    APPLICANT:  Lawton, Kay
;    APPLICANT:  Ellis, Daniel
;    APPLICANT:  Uknes, Scott
;    APPLICANT:  Jesse, Taco
;    APPLICANT:  Vos, Pieter
;    TITLE OF INVENTION:  GENE ENCODING A PROTEIN INVOLVED IN THE
;    TITLE OF INVENTION:  SIGNAL TRANSDUCTION CASCADE LEADING TO SYSTEMIC ACQUIRED RESIS
;    TITLE OF INVENTION:  IN PLANTS
```

```
;    NUMBER OF SEQUENCES:  17
;    CORRESPONDENCE ADDRESS:
;      ADDRESSEE:  No. US20020152499A1artis Corporation
;      STREET:  520 White Plains Road, P.O. Box 2005
;      CITY:  Tarrytown
;      STATE:  New York
;      COUNTRY:  USA
;      ZIP:  10591
;    COMPUTER READABLE FORM:
;      MEDIUM TYPE:  Floppy disk
;      COMPUTER:  IBM PC compatible
;      OPERATING SYSTEM:  PC-DOS/MS-DOS
;      SOFTWARE:  PatentIn Release #1.0, Version #1.30
;    CURRENT APPLICATION DATA:
;      APPLICATION NUMBER:  US/10/079,035
;      FILING DATE:
;      CLASSIFICATION:
;    PRIOR APPLICATION DATA:
;      APPLICATION NUMBER:  09/577,799
;      FILING DATE:
;      APPLICATION NUMBER:  08/880,179
;      FILING DATE:
;    ATTORNEY/AGENT INFORMATION:
;      NAME:  Meigs, J. Timothy
;      REGISTRATION NUMBER:  38,241
;      REFERENCE/DOCKET NUMBER:  CGC 1909
;    TELECOMMUNICATION INFORMATION:
;      TELEPHONE:  (919) 541-8587
;      TELEFAX:  (919) 541-8689
;  INFORMATION FOR SEQ ID NO:  3:
;    SEQUENCE CHARACTERISTICS:
;     LENGTH: 593 amino acids
;      TYPE:  amino acid
;      TOPOLOGY:  linear
;    MOLECULE TYPE:  protein
US-10-079-035-3

  Query Match             43.2%;  Score 1276;  DB 14;  Length 593;
  Best Local Similarity   47.2%;  Pred. No. 8.7e-109;
  Matches  273;  Conservative  113;  Mismatches  165;  Indels   28;  Gaps    9;

Qy          5 TSHVTNAFSDSDSASVEEGDADADADVEALRRLSDNLAAAFRSPEDFAFLADARIAVPGG 64
              || |    :||    :          || ||: ||::  : | ||:|  | :||:: :
Db         17 TSFVATDNTDSSIVYLAAEQVLTGPDVSALQLLSNSFESVFDSPDD--FYSDAKLVL--- 71

Qy         65 GGGGGDLRVHRCVLSARSPFLRGVFARRAAAAAGGGGEDGSERLELRELLGGGGEEVEVG 124
                | ::  |||||||||| | :   |  ||          : :|||:|:     :: |||
Db         72 -SDGREVSFHRCVLSARSSFFKSALA--AAKKEKDSNNTAAVKLELKEI----AKDYEVG 124

Qy        125 YEALRLVLDYLYSGRVGDLPKAACLCVDEDCAHVGCHPAVAFMAQVLFAASTFQVAELTN 184
              ::::  || |:|| ||    ||    | ||:| || | ||| || :||: |  |:: ||
Db        125 FDSVVTVLAYVYSSRVRPPPKGVSECADENCCHVACRPAVDFMLEVLYLAFIFKIPELIT 184

Qy        185 LFQRRLLDVLDKVEVDNLLLILSVANLCNKSCMKLLERCLDMVVRSNLDMITLEKSLPPD 244
              |:|| ||||:||| ::: |:|| :||:| |:|||||:|| :::|:||:||::|||||| :
Db        185 LYQRHLLDVVDKVVIEDTLVILKLANICGKACMKLLDRCKEIIVKSNVDMVSLEKSLPEE 244

Qy        245 VIKQIIDARLSLGLISPENKGFPNKHVRRIHRALDSDDVELVRMLLTEGQTNLDDAFALH 304
              ::|:||| |  |||   |: |    |||  :|:||||||:|||::|| |  |||||| |||
Db        245 LVKEIIDRRKELGLEVPKVK----KHVSNVHKALDSDDIELVKLLLKEDHTNLDDACALH 300

Qy        305 YAVEHCDSKITTELLDLALADVNHRNPRGYTVLHIAARRREPKIIVSLLTKGARPADVTF 364
              :|| :|: |  |:|| | |||||||||||||||:|| |:||::|:||| |||  :: |
Db        301 FAVAYCNVKTATDLLKLDLADVNHRNPRGYTVLHVAAMRKEPQLILSLLEKGASASEATL 360

Qy        365 DGRKAVQISKRLTKQGDYFGVTEEGKPSPKDRLCIEILEQAERRDPQLGEASVSLAMAGE 424
              :|| |: |:|: |   :   : |: | | | |||:|||| ::|:    :   | |:| :
Db        361 EGRTALMIAKQATMAVECNNIPEQCKHSLKGRLCVEILEQEDKREQIPRDVPPSFAVAAD 420

Qy        425 SLRGRLLYLENRVALARIMFPMEARVAMDIAQVDGTLEFNLGSGANPPPER----QRTTV 480
              |:  || |||||||: :|| ||: ||:||:: || || : |     |:|    :||:
Db        421 ELKMTLLDLENRVALAQRLFPTEAQAAMEIAEMKGTCEFIVTS---LEPDRLTGTKRTSP 477

Qy        481 DLNESPFIMKEEHLARMTALSKTVELGKRFFPRCSNVLDKIMD-DETDPVSLGRDTSAEK 539
                :  :|| : ||| :|: ||||||||||||||||| |||:||: ::   :: | | :|||
Db        478 GVKIAPFRILEEHQSRLKALSKTVELGKRFFPRCSAVLDQIMNCEDLTQLACGEDDTAEK 537

Qy        540 R----KRFHDLQDVLQKAFHEDKEENDRSGLSSSSSSTS 574
              |    :|: ::|: |:||| ||  |   | |: |:||||
Db        538 RLQKKQRYMEIQETLKKAFSEDNLELGNSSLTDSTSSTS 576


RESULT 13
US-10-328-675A-6
; Sequence 6, Application US/10328675A
; Publication No. US20030159171A1
; GENERAL INFORMATION:
;  APPLICANT: Salmeron, John
;  APPLICANT:  Weislo, Laura
;  APPLICANT:  Willits, Michael
;  TITLE OF INVENTION: NOVEL PLANT GENES AND USES THEREOF
;  FILE REFERENCE: 30857USNPDIV1
;  CURRENT APPLICATION NUMBER: US/10/328,675A
;  CURRENT FILING DATE:  2002-12-23
;  PRIOR APPLICATION NUMBER: 09/519,232
;  PRIOR FILING DATE: 2000-03-06
;  PRIOR APPLICATION NUMBER: 60/219,338
;  PRIOR FILING DATE: 1999-03-09
;  NUMBER OF SEQ ID NOS: 74
;  SOFTWARE: PatentIn Ver. 2.1
; SEQ ID NO 6
;   LENGTH: 579
;   TYPE: PRT
;   ORGANISM: Brassica napus
;   FEATURE:
;   NAME/KEY: Misc_Feature
;   LOCATION: (6)...(6)
;   OTHER INFORMATION: Xaa is either Gly or Arg
;   FEATURE:
;   NAME/KEY: Misc_Feature
;   LOCATION: (19)...(19)
;   OTHER INFORMATION: Xaa is either Leu or Pro
;   FEATURE:
;   NAME/KEY: Misc_Feature
;   LOCATION: (34)...(34)
;   OTHER INFORMATION: Xaa is either Tyr or Phe
;   FEATURE:
;   NAME/KEY: Misc_Feature
;   LOCATION: (39)...(39)
;   OTHER INFORMATION: Xaa is either Phe or Leu
;   FEATURE:
;   NAME/KEY: Misc_Feature
;   LOCATION: (97)...(97)
;   OTHER INFORMATION: Xaa is either Ala or Thr
;   FEATURE:
;   NAME/KEY: Misc_Feature
;   LOCATION: (151)...(151)
;   OTHER INFORMATION: Xaa is either Glu or Asp
;   FEATURE:
;   NAME/KEY: Misc_Feature
;   LOCATION: (196)...(196)
;   OTHER INFORMATION: Xaa is either Asn or Ile
;   FEATURE:
;   NAME/KEY: Misc_Feature
;   LOCATION: (242)...(242)
;   OTHER INFORMATION: Xaa is either Asp or Asn
US-10-328-675A-6

  Query Match             41.4%;  Score 1222.5;  DB 12;  Length 579;
  Best Local Similarity   45.9%;  Pred. No. 7.2e-104;
  Matches  260;  Conservative  110;  Mismatches  160;  Indels   37;  Gaps   10;

Qy         14 DSDSASVEEGDADADADVEALRRLSDNLAAAFRSPEDFAFLADARIAVPGGGGGGGDLRV 73
              :| |::|    :      :| | : ||::| : | |||  || :||:: :        ::
Db         27 NSGSSTVXPTELXTRPEVSAFQLLSNSLESVFDSPE--AFYSDAKLVL----SDDKEVSF 80
```

```
Qy         74 HRCVLSARSPFLRGVFARRAAAAAGGGGEDGSERLELRELLGGGGEEVEVGYEALRLVLD 133
              |||:|||||     :| : |  ||     :    :|||: |       | :||:::: ||
Db         81 HRCILSARS-----LFFKAALXAAEKVQKSTPVKLELKTL----AAEYDVGFDSVVAVLA 131

Qy        134 YLYSGRVGDLPKAACLCVDEDCAHVGCHPAVAFMAQVLFAASTFQVAELTNLFQRRLLDV 193
              |:|||||   ||    | |  | || | ||| || :||: |  ||: ||  ::|| ||||
Db        132 YVYSGRVRPPPKGVSECADXSCCHVACRPAVDFMVEVLYLAFVFQIQELVTMYQRHLLDV 191

Qy        194 LDKVEVDNLLLLILSVANLCNKSCMKLLERCLDMVVRSNLDMITLEKSLPPDVIKQIIDAR 253
              :||| ::: |::| :||:| |:| || ::| :::|:||:|::||:|||| : ||:|| |
Db        192 VDKVXIEDTLVVLKLANICGKACKKLFDKCREIIVKSNVDVVTLKKSLPEXIAKQVIDIR 251

Qy        254 LSLGLISPENKGFPNKHVRRIHRALDSDDVELVRMLLTEGQTNLDDAFALHYAVEHCDSK 313
                |||   |    | |||  ||:||:|||::|| ||| || ||||:|:|||:|| :|| |
Db        252 KELGLEVAE----PEKHVSNIHKALESDDLDLVVMLLKEGHTNLDEAYALHFAVAYCDEK 307

Qy        314 ITTELLDLALADVNHRNPRGYTVLHIAARRREPKIIVSLLTKGARPADVTFDGRKAVQIS 373
              ||:|  |||| |||||||:|:|| |:|| :|  ||||||   ::: ||| |: |:
Db        308 TARNLLELGFADVNRRNPRGYTVIHVAAMRKEPTLIALLLTKGANALEMSLDGRTALLIA 367

Qy        374 KRLTKQGDYFGVTEEGKPSPKDRLCIEILEQAER-RDPQLGEASVSLAMAGESLRGRLLY 432
              |::||  :   : |:|| : |  :|:|||:| :  |:|   : | |||:| :  : ||:
Db        368 KQVTKAAECC-ILEKGKLAAKGGVCVEILKQPDNTREPFPEDVSPSLAVAADQFKIRLID 426

Qy        433 LENRVALARIMFPMEARVAMDIAQVDGTLEFNLGSGANPPPERQRTTVDLNESPFIMKEE 492
              ||||| :|| ::|||:|||| |:: || || :           | ||:  ||   |
Db        427 LENRVQMARCLYPMEAQVAMDFARMKGTREFVV----------TTATDLHMEPFKFVEM 475

Qy        493 HLARMTALSKTVELGKRFFPRCSNVLDKIMDDE--TDPVSLGRDT---SAEKRKRFHDLQ 547
              | :|:|||||||| |||||||| ||| |:| |  |    :  ||     :||:|| ::|
Db        476 HQSRLTALSKTVEFGKRFFPRCSKVLDDIVDSEDLTILALVEEDTPEQRQQKRQRFMEIQ 535

Qy        548 DVLQKAFHEDKEENDRSGLSSSSSSTS 574
              .  :::| || :|||:  :| ||:||||||
Db        536 EIVQMAFSKDKEDLGKSSLSASSSSTS 562


RESULT 14
US-10-328-675A-20
; Sequence 20, Application US/10328675A
; Publication No. US20030159171A1
; GENERAL INFORMATION:
;  APPLICANT: Salmeron, John
;  APPLICANT:  Weislo, Laura
;  APPLICANT:  Willits, Michael
;  TITLE OF INVENTION: NOVEL PLANT GENES AND USES THEREOF
;  FILE REFERENCE: 30857USNPDIV1
;  CURRENT APPLICATION NUMBER: US/10/328,675A
;  CURRENT FILING DATE:  2002-12-23
;  PRIOR APPLICATION NUMBER: 09/519,232
;  PRIOR FILING DATE: 2000-03-06
;  PRIOR APPLICATION NUMBER: 60/219,338
;  PRIOR FILING DATE: 1999-03-09
;  NUMBER OF SEQ ID NOS: 74
;  SOFTWARE: PatentIn Ver. 2.1
; SEQ ID NO 20
;   LENGTH: 600
;   TYPE: PRT
;   ORGANISM: Arabidopsis thaliana
US-10-328-675A-20

  Query Match             41.1%;  Score 1213.5;  DB 12;  Length 600;
  Best Local Similarity   45.8%;  Pred. No. 5.2e-103;
  Matches  277;  Conservative  105;  Mismatches  172;  Indels   51;  Gaps   17;

Qy          1 MEPPTSHVTNAFSDSDSASVEEGD----ADADAD----------VEALRRLSDNLAAAFR 46
              |   |:  |  |||| |   |:    |::  |           | ||: ||: | : |
Db          1 MATTTTTTTARFSDSYEFSNTSGNSFFAAESSLDYPTEFLTPPEVSALKLLSNCLESVFD 60

Qy         47 SPEDFAFLADARIAVPGGGGGGGDLRVHRCVLSARSPFLRGVFARRAAAAAGGGGEDGSE 106
              |||   | :||:: :     || ::  |||:|||| |    || : | |         :
Db         61 SPE--TFYSDAKLVL----AGGREVSFHRCILSARIP----VF-KSALATVKEQKSSTTV 109

Qy        107 RLELRELLGGGGEEVEVGYEALRLVLDYLYSGRVGDLPKAACLCVDEDCAHVGCHPAVAF 166
              :|:|:|:      : |||:::: || |:|||||   || |  |||:|| || |   | |
Db        110 KLQLKEI----ARDYEVGFDSVVAVLAYVYSGRVRSPPKGASACVDDDCCHVACRSKVDF 165

Qy        167 MAQVLFAASTFQVAELTNLFQRRLLDVLDKVEVDNLLLILSVANLCNKSCMKLLERCLDM 226
              | :||: :  ||: ||  |::|: |:::||| |:::|:|  :  ||  :  |||:|:::
Db        166 MVEVLYLSFVFQIQELVTLYERQFLEIVDKVVVEDILVIFKLDTLCGTTYKKLLDRCIEI 225

Qy        227 VVRSNLDMITLEKSLPPDVIKQIIDARLSLGLISPENKGFPNKHVRRIHRALDSDDVELV 286
              :|:|::::::|||||  : ||||| | :| |  |: :    :||: |::||||||||||
Db        226 IVKSDIELVSLEKSLPQHIFKQIIDIREALCLEPPKLE----RHVKNIYKALDSDDVELV 281

Qy        287 RMLLTEGQTNLDDAFALHYAVEHCDSKITTELLDLALADVNHRNPRGYTVLHIAARRREP 346
              :||| || ||||:|:|||:|: ||  |   :||:| ||||| |||||||||:|| |:||
Db        282 KMLLLEGHTNLDEAYALHFAIAHCAVKTAYDLLELELADVNLRNPRGYTVLHVAAMRKEP 341

Qy        347 KIIVSLLTKGARPADVTFDGRKAVQISKRLTKQGDYFGVTEEGKPSPKDRLCIEILEQAE 406
              |:|:||| |||   | | ||| |: | |||||  ||   ||:| || |  ||||:||  |
Db        342 KLIISLLMKGANILDTTLDGRTALVIVKRLTKADDYKTSTEDGTPSLKGGLCIEVLEH-E 400

Qy        407 RRDPQLG--EASVSLAMAGESLRGRLLYLENRVALARIMFPMEARVAMDIAQVDGTLEFN 464
              ::   |   |||:|| :  | || |||| |||||||::||:|      ||::: | ||
Db        401 QKLEYLSPIEASLSLPVTPEELRMRLLYYENRVALARLLFPVETETVQGIAKLEETCEFT 460

Qy        465 LGSGANPPPE--RQRTTVDLNESPFIMKEEHLARMTALSKTVELGKRFFPRCSNVLDKIM 522
              |   |    :||::||| :|| : |:||:|: || |||||||:| |||  ||  |
Db        461 -ASSLEPDHHIGEKRTSLDLNMAPFQIHEKHLSRLRALCKTVELGKRYFKRCS--LDHFM 517

Qy        523 DDE--TDPVSLGRDT---SAEKRKRFHDLQDVLQKAFHEDKEENDRSGLSSSSSSTSIGA 577
              | |       |:  ||     :|::|: :||: | | | |||||    | ||:   || |
Db        518 DTEDLNHLASVEEDTPEKRLQKKQRYMELQETLMKTFSEDKEE---CGKSSTPKPTS--A 572

Qy        578 IRPRR 582
              :|  |
Db        573 VRSNR 577


RESULT 15
US-09-934-455-434
; Sequence 434, Application US/09934455
; Publication No. US20030121070A1
; GENERAL INFORMATION:
;  APPLICANT: Adam, Luc
;  APPLICANT:  Creelman, Robert
;  APPLICANT:  Dubell, Arnold
;  APPLICANT:  Heard, Jacqueline
;  APPLICANT:  Jiang, Cai-Zhong
;  APPLICANT:  Keddie, James
;  APPLICANT:  Pilgrim, Marsha
;  APPLICANT:  Ratcliffe, Oliver
;  APPLICANT:  Reuber, Lynne
;  APPLICANT:  Riechmann, Jose Luis
;  APPLICANT:  Yu, Guo-Liang
;  APPLICANT:  Pineda, Omaira
;  TITLE OF INVENTION: Genes for Modifying Plant Traits IV
;  FILE REFERENCE: MBI-0025
;  CURRENT APPLICATION NUMBER: US/09/934,455
;  CURRENT FILING DATE:  2001-08-22
;  PRIOR APPLICATION NUMBER: 60/227439
;  PRIOR FILING DATE: 2000-08-22
;  PRIOR APPLICATION NUMBER: MBI-0022
;  PRIOR FILING DATE: 2001-11-16
;  PRIOR APPLICATION NUMBER: MBI-0023
;  PRIOR FILING DATE: 2001-04-17
;  NUMBER OF SEQ ID NOS: 516
;  SOFTWARE: PatentIn version 3.1
; SEQ ID NO 434
;   LENGTH: 601
;   TYPE: PRT
;   ORGANISM: Arabidopsis thaliana
US-09-934-455-434

  Query Match             41.1%;  Score 1213.5;  DB 11;  Length 601;
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Best Local Similarity 45.8%; Pred. No. 5.2e-103;
Matches 277; Conservative 105; Mismatches 172; Indels 51; Gaps 17;

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Qy        167 MAQVLFAASTFQVAELTNLFQRRLLDVLDKVEVDNLLLILSVANLCNKSCMKLLERCLDM 226
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              :||| || ||||:|:|||:|: ||  |   :||:| ||||| ||||||||||:|| |:||
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Qy        407 RRDPQLG--EASVSLAMAGESLRGRLLYLENRVALARIMFPMEARVAMDIAQVDGTLEFN 464
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Qy        465 LGSGANPPPE--RQRTTVDLNESPFIMKEEHLARMTALSKTVELGKRFFPRCSNVLDKIM 522
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Qy        523 DDE--TDPVSLGRDT---SAEKRKRFHDLQDVLQKAFHEDKEENDRSGLSSSSSSTSIGA 577
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Qy        578 IRPRR 582
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Db        574 VRSNR 578
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Search completed: December 4, 2003, 19:26:20
Job time : 37 secs

GenCore version 5.1.6

OM protein - protein search, using sw model

Run on: December 4, 2003, 19:16:14 ; Search time 21 Seconds
(without alignments)
1172.615 Million cell updates/sec

Title: US-09-294-539-4
Perfect score: 2952
Sequence: 1 MEPPTSHVTNAFSDSDSASV.....RSGLSSSSSSTSIGAIRPRR 582

Scoring table: BLOSUM62
Gapop 10.0 , Gapext 0.5

Searched: 328717 seqs, 42310858 residues

Total number of hits satisfying chosen parameters: 328717

Minimum DB seq length: 0
Maximum DB seq length: 2000000000

Post-processing: Minimum Match 0%
Maximum Match 100%
Listing first 45 summaries

Database : Issued_Patents_AA:*
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Pred. No. is the number of results predicted by chance to have a score greater than or equal to the score of the result being printed, and is derived by analysis of the total score distribution.

SUMMARIES

Result No.	Score	% Query Match	Length	DB	ID	Description
1	1737	58.8	576	4	US-09-519-232-4	Sequence 4, Appli
2	1672.5	56.7	588	4	US-09-519-232-2	Sequence 2, Appli
3	1629	55.2	604	4	US-09-519-232-64	Sequence 64, Appl
4	1276	43.2	593	2	US-08-989-478-2	Sequence 2, Appli
5	1276	43.2	593	3	US-08-996-685-2	Sequence 2, Appli
6	1276	43.2	593	3	US-08-880-179-3	Sequence 3, Appli
7	1270	43.0	593	2	US-08-989-478-8	Sequence 8, Appli
8	1270	43.0	593	3	US-08-996-685-8	Sequence 8, Appli
9	1222.5	41.4	579	4	US-09-519-232-6	Sequence 6, Appli
10	1213.5	41.1	600	4	US-09-519-232-20	Sequence 20, Appl
11	1213.5	41.1	601	4	US-09-519-232-72	Sequence 72, Appl
12	1188.5	40.3	521	2	US-08-989-478-12	Sequence 12, Appl
13	1188.5	40.3	521	3	US-08-996-685-12	Sequence 12, Appl
14	1134	38.4	469	2	US-08-989-478-10	Sequence 10, Appl
15	1134	38.4	469	3	US-08-996-685-10	Sequence 10, Appl
16	1087	36.8	621	4	US-09-551-778-2	Sequence 2, Appli
17	1087	36.8	621	4	US-09-551-778-4	Sequence 4, Appli
18	1060.5	35.9	591	4	US-09-519-232-66	Sequence 66, Appl
19	1052.5	35.7	397	2	US-08-989-478-14	Sequence 14, Appl
20	1052.5	35.7	397	3	US-08-996-685-14	Sequence 14, Appl
21	1045.5	35.4	609	4	US-09-569-804-11	Sequence 11, Appl
22	1045	35.4	607	4	US-09-569-804-10	Sequence 10, Appl
23	1031	34.9	586	4	US-09-519-232-8	Sequence 8, Appli
24	1009	34.2	574	4	US-09-519-232-70	Sequence 70, Appl
25	995	33.7	475	4	US-09-569-804-4	Sequence 4, Appli
26	971.5	32.9	601	4	US-09-519-232-18	Sequence 18, Appl
27	844.5	28.6	409	4	US-09-569-804-21	Sequence 21, Appl
28	825	27.9	217	4	US-09-519-232-46	Sequence 46, Appl
29	823	27.9	219	4	US-09-519-232-30	Sequence 30, Appl
30	782.5	26.5	381	4	US-09-569-804-17	Sequence 17, Appl
31	751	25.4	261	2	US-08-989-478-16	Sequence 16, Appl
32	751	25.4	261	3	US-08-996-685-16	Sequence 16, Appl
33	678	23.0	369	4	US-09-519-232-74	Sequence 74, Appl
34	644	21.8	165	4	US-09-519-232-38	Sequence 38, Appl
35	614	20.8	165	4	US-09-519-232-40	Sequence 40, Appl
36	599	20.3	165	4	US-09-519-232-42	Sequence 42, Appl
37	502.5	17.0	180	4	US-09-569-804-35	Sequence 35, Appl
38	493	16.7	165	4	US-09-519-232-58	Sequence 58, Appl
39	485	16.4	165	4	US-09-519-232-32	Sequence 32, Appl
40	477	16.2	165	4	US-09-519-232-34	Sequence 34, Appl
41	470	15.9	165	4	US-09-519-232-48	Sequence 48, Appl
42	461.5	15.6	158	4	US-09-519-232-50	Sequence 50, Appl
43	450	15.2	165	4	US-09-519-232-44	Sequence 44, Appl
44	441	14.9	165	4	US-09-519-232-56	Sequence 56, Appl
45	425.5	14.4	166	4	US-09-519-232-54	Sequence 54, Appl

ALIGNMENTS

RESULT 1
US-09-519-232-4
; Sequence 4, Application US/09519232
; Patent No. 6528702
; GENERAL INFORMATION:
; APPLICANT: Salmeron, John
; APPLICANT: Weislo, Laura
; APPLICANT: Willits, Michael
; APPLICANT: Mengiste, Tesfaye
; TITLE OF INVENTION: NOVEL PLANT GENES AND USES THEREOF
; FILE REFERENCE: S-30857A/RTP2095
; CURRENT APPLICATION NUMBER: US/09/519,232
; CURRENT FILING DATE: 2000-03-06
; NUMBER OF SEQ ID NOS: 74
; SOFTWARE: PatentIn Ver. 2.1
; SEQ ID NO 4
; LENGTH: 576
; TYPE: PRT
; ORGANISM: Lycopersicon esculentum
US-09-519-232-4

Query Match 58.8%; Score 1737; DB 4; Length 576;
Best Local Similarity 59.9%; Pred. No. 1.6e-168;
Matches 349; Conservative 94; Mismatches 108; Indels 32; Gaps 8;

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Db           6 AFSDSNDISGSSSICCMNESETSL-ADVNSLKRLSETLESIFDASAPDFDFFADAKLLAP 64

Qy          63 GGGGGGGDLRVHRCVLSARSPFLRGVFARRAAAAAGGGGEDGSERLELRELLGGGGEEVE 122
                  || :: ||||:||||||| : ||           |:| | :|||:||:    :| |
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Qy         123 VGYEALRLVLDYLYSGRVGDLPKAACLCVDEDCAHVGCHPAVAFMAQVLFAASTFQVAEL 182
               | ::|:  || |||||:|     |  |:||| :| || | |||||| |||:|: |||:::|
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Qy         183 TNLFQRRLLDVLDKVEVDNLLLILSVANLCNKSCMKLLERCLDMVVRSNLDMITLEKSLP 242
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                |::||| |:|  |||  ||: |||:|||:|||||||||||||:|||| || | ||||:|
Db         227 HDIVKQITDSRAELGLQGPESNGFPDKHVKRIHRALDSDDVELLRMLLKEGHTTLDDAYA 286

Qy         303 LHYAVEHCDSKITTELLDLALADVNHRNPRGYTVLHIAARRREPKIIVSLLTKGARPADV 362
               ||||| :||:| | |||||:||||||:||||:||||:|| |:||||||||||||||:|:
Db         287 LHYAVAYCDAKTTAELLDLSLADVNHQNPRGHTVLHVAAMRKEPKIIVSLLTKGARPSDL 346

Qy         363 TFDGRKAVQISKRLTKQGDYFGVTEEGKPSPKDRLCIEILEQAERRDPQLGEASVSLAMA 422
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Db        407 GDDLRMKLLYLENRVGLAKLLFPMEAKVAMDIAQVDGTSELPLASMRKKIADAQRTTVDL 466

Qy        483 NESPPFIMKEEHLARMTALSKTVELGKRFFPRCSNVLDKIM--DDETDPVSLGRDTSAE-- 538

Db        467 NEAPFKMKEEHLNRLRALSRTVELGKRFFPRCSEVLNKIMDADDLSEIAYMGNDTVEERQ 526

Qy        539 -KRKRFHDLQDVLQKAFHEDKEENDRSGLSSSSSSTSIGAIRP 580

Db        527 LKKQRYMELQEILSKAFTEDKEEFAKTNMSSSCSSTSKGVDKP 569


RESULT 2
US-09-519-232-2
; Sequence 2, Application US/09519232
; Patent No. 6528702
; GENERAL INFORMATION:
;  APPLICANT: Salmeron, John
;  APPLICANT: Weislo, Laura
;  APPLICANT: Willits, Michael
;  APPLICANT: Mengiste, Tesfaye
;  TITLE OF INVENTION: NOVEL PLANT GENES AND USES THEREOF
;  FILE REFERENCE: S-30857A/RTP2095
;  CURRENT APPLICATION NUMBER: US/09/519,232
;  CURRENT FILING DATE: 2000-03-06
;  NUMBER OF SEQ ID NOS: 74
;  SOFTWARE: PatentIn Ver. 2.1
; SEQ ID NO 2
;   LENGTH: 588
;   TYPE: PRT
;   ORGANISM: Nicotiana tabacum
US-09-519-232-2

  Query Match             56.7%;  Score 1672.5;  DB 4;  Length 588;
  Best Local Similarity   56.8%;  Pred. No. 6.6e-162;
  Matches  336;  Conservative  102;  Mismatches  119;  Indels   35;  Gaps    8;

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Db         67 AKLVV---SGPCKEIPVHRCILSARSPFFKNLFC--------GKKEKNSSKVELKEVM-- 113

Qy        117 GGEEVEVGYEALRLVLDYLYSGRVGDLPKAACLCVDEDCAHVGCHPAVAFMAQVLFAAST 176

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Qy        177 FQVAELTNLFQRRLLDVLDKVEVDNLLLILSVANLCNKSCMKLLERCLDMVVRSNLDMIT 236

Db        172 FQISELVDKFQRHLLDILDKTAADDVMMVLSVANICGKACERLLSSCIEIIVKSNVDIIT 231

Qy        237 LEKSLPPDVIKQIIDARLSLGLISPENKGFPNKHVRRIHRALDSDDVELVRMLLTEGQTN 296

Db        232 LDKALPHDIVKQITDSRAELGLQGPESNGFPDKHVKRIHRALDSDDVELLQMLLREGHTT 291

Qy        297 LDDAFALHYAVEHCDSKITTELLDLALADVNHRNPRGYTVLHIAARRREPKIIVSLLTKG 356

Db        292 LDDAYALHYAVAYCDAKTTAELLDLALADINHQNSRGYTVLHVAAMRKEPKIVVSLLTKG 351

Qy        357 ARPADVTFDGRKAVQISKRLTKQGDYFGVTEEGKPSPKDRLCIEILEQAERRDPQLGEAS 416

Db        352 ARPSDLTSDGRKALQIAKRLTRLVDFSKSPEEGKSASNDRLCIEILEQAERRDPLLGEAS 411

Qy        417 VSLAMAGESLRGRLLYLENRVALARIMFPMEARVAMDIAQVDGTLEFNLGSGANPPPERQ 476

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Qy        535 TSAE---KRKRFHDLQDVLQKAFHEDKEENDR-SGLSSSSSSTSIGAIRPRR 582

Db        532 TAEERQLKKQRYMELQEILTKAFTEDKEEYDKTNNISSSCSSTSKGVDKPNK 583


RESULT 3
US-09-519-232-64
; Sequence 64, Application US/09519232
; Patent No. 6528702
; GENERAL INFORMATION:
;  APPLICANT: Salmeron, John
;  APPLICANT: Weislo, Laura
;  APPLICANT: Willits, Michael
;  APPLICANT: Mengiste, Tesfaye
;  TITLE OF INVENTION: NOVEL PLANT GENES AND USES THEREOF
;  FILE REFERENCE: S-30857A/RTP2095
;  CURRENT APPLICATION NUMBER: US/09/519,232
;  CURRENT FILING DATE: 2000-03-06
;  NUMBER OF SEQ ID NOS: 74
;  SOFTWARE: PatentIn Ver. 2.1
; SEQ ID NO 64
;   LENGTH: 604
;   TYPE: PRT
;   ORGANISM: Beta vulgaris
US-09-519-232-64

  Query Match             55.2%;  Score 1629;  DB 4;  Length 604;
  Best Local Similarity   57.4%;  Pred. No. 1.9e-157;
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Qy        288 MLLTEGQTNLDDAFALHYAVEHCDSKITTELLDLALADVNHRNPRGYTVLHIAARRREPK 347

Db        304 MLLKERHTTLDDAYALHYAVAHCDAKTTTELLELGLADVNLRNLRGHTVLHVAAMRKEPK 363

Qy        348 IIVSLLTKGARPADVTFDGRKAVQISKRLTKQGDYFGVTEEGKPSPKDRLCIEILEQAER 407

Db        364 IIVSLLTKGAHPSDITSDDKKALQIAKRLTKAVDFYKTTEQGKDAPKDRLCIEILEQAER 423

Qy        408 RDPQLGEASVSLAMAGESLRGRLLYLENRVALARIMFPMEARVAMDIAQVDGTLEFNLGS 467

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RESULT 4
US-08-989-478-2
; Sequence 2, Application US/08989478
; Patent No. 5986082
;  GENERAL INFORMATION:
;    APPLICANT:  Uknes, Scott
;    APPLICANT:  Hunt, Michelle
;    APPLICANT:  Steiner, Henry-York
;    APPLICANT:  Ryals, John
;    TITLE OF INVENTION:  ALTERED FORMS OF THE NIM1 GENE CONFERRING
;    TITLE OF INVENTION:  DISEASE RESISTANCE IN PLANTS
;    NUMBER OF SEQUENCES:  32
;    CORRESPONDENCE ADDRESS:
;      ADDRESSEE:  No. 5986082artis Corporation
;      STREET:  3054 Cornwallis Road
;      CITY:  Research Triangle Park
;      STATE:  No. 5986082th Carolina
;      COUNTRY:  USA
;      ZIP:  27709
;    COMPUTER READABLE FORM:
;      MEDIUM TYPE:  Floppy disk
;      COMPUTER:  IBM PC compatible
;      OPERATING SYSTEM:  PC-DOS/MS-DOS
;      SOFTWARE:  PatentIn Release #1.0, Version #1.30
;    CURRENT APPLICATION DATA:
;      APPLICATION NUMBER:  US/08/989,478
;      FILING DATE:
;      CLASSIFICATION:
;    PRIOR APPLICATION DATA:
;      APPLICATION NUMBER:  US 60/033,177
;      FILING DATE:  13-DEC-1996
;    PRIOR APPLICATION DATA:
;      APPLICATION NUMBER:  US 60/034,379
;      FILING DATE:  27-DEC-1996
;    PRIOR APPLICATION DATA:
;      APPLICATION NUMBER:  US 60/034,382
;      FILING DATE:  27-DEC-1996
;    PRIOR APPLICATION DATA:
;      APPLICATION NUMBER:  US 60/034,730
;      FILING DATE:  10-JAN-1997
;    PRIOR APPLICATION DATA:
;      APPLICATION NUMBER:  US 60/035,021
;      FILING DATE:  10-JAN-1997
;    PRIOR APPLICATION DATA:
;      APPLICATION NUMBER:  US 60/035,022
;      FILING DATE:  10-JAN-1997
;    ATTORNEY/AGENT INFORMATION:
;      NAME:  Meigs, J. Timothy
;      REGISTRATION NUMBER:  38,241
;      REFERENCE/DOCKET NUMBER:  PF/5-21214/P1/CGC1911
;    TELECOMMUNICATION INFORMATION:
;      TELEPHONE:  (919) 541-8587
;      TELEFAX:  (919) 541-8689
;  INFORMATION FOR SEQ ID NO:  2:
;    SEQUENCE CHARACTERISTICS:
;     LENGTH: 593 amino acids
;      TYPE:  amino acid
;      TOPOLOGY:  linear
;    MOLECULE TYPE:  protein
US-08-989-478-2

  Query Match             43.2%;  Score 1276;  DB 2;  Length 593;
  Best Local Similarity   47.2%;  Pred. No. 2.2e-121;
  Matches  273;  Conservative  113;  Mismatches  165;  Indels   28;  Gaps    9;

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Qy         65 GGGGGDLRVHRCVLSARSPFLRGVFARRAAAAAGGGGEDGSERLELRELLGGGGEEVEVG 124
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Qy        125 YEALRLVLDYLYSGRVGDLPKAACLCVDEDCAHVGCHPAVAFMAQVLFAASTFQVAELTN 184
              ::::  || |:|| ||    ||      | ||:| || | ||| || :||: |  |:: ||
Db        125 FDSVVTVLAYVYSSRVRPPPKGVSECADENCCHVACRPAVDFMLEVLYLAFIFKIPELIT 184

Qy        185 LFQRRLLDVLDKVEVDNLLLILSVANLCNKSCMKLLERCLDMVVRSNLDMITLEKSLPPD 244
              |:|| ||||:||| ::: |:|| :||:| |:|||||:|| :::|:||:||::|||||| :
Db        185 LYQRHLLDVVDKVVIEDTLVILKLANICGKACMKLLDRCKEIIVKSNVDMVSLEKSLPEE 244

Qy        245 VIKQIIDARLSLGLISPENKGFPNKHVRRIHRALDSDDVELVRMLLTEGQTNLDDAFALH 304
              ::|:||| |  |||  |: |    |||  :|:||||||:|||::|| |  |||||| |||
Db        245 LVKEIIDRRKELGLEVPKVK----KHVSNVHKALDSDDIELVKLLLKEDHTNLDDACALH 300

Qy        305 YAVEHCDSKITTELLDLALADVNHRNPRGYTVLHIAARRREPKIIVSLLTKGARPADVTF 364
              :|| :|: |  |:|| | |||||||||||||||:|| |:||::|:||| |||  :: |
Db        301 FAVAYCNVKTATDLLKLDLADVNHRNPRGYTVLHVAAMRKEPQLILSLLEKGASASEATL 360

Qy        365 DGRKAVQISKRLTKQGDYFGVTEEGKPSPKDRLCIEILEQAERRDPQLGEASVSLAMAGE 424
              :|| |: |:|: |   :  : |: | | | |||:|||| ::|:    :   | |:| :
Db        361 EGRTALMIAKQATMAVECNNIPEQCKHSLKGRLCVEILEQEDKREQIPRDVPPSFAVAAD 420

Qy        425 SLRGRLLYLENRVALARIMFPMEARVAMDIAQVDGTLEFNLGSGANPPPER----QRTTV 480
              |:  || ||||||||: :|| ||: ||:||:: || || : |     |:|    :||:
Db        421 ELKMTLLDLENRVALAQRLFPTEAQAAMEIAEMKGTCEFIVTS---LEPDRLTGTKRTSP 477

Qy        481 DLNESPFIMKEEHLARMTALSKTVELGKRFFPRCSNVLDKIMD-DETDPVSLGRDTSAEK 539
              :  :|| : ||| :|: |||||||||||||||| |||:||: ::   :: | | :|||
Db        478 GVKIAPFRILEEHQSRLKALSKTVELGKRFFPRCSAVLDQIMNCEDLTQLACGEDDTAEK 537

Qy        540 R----KRFHDLQDVLQKAFHEDKEENDRSGLSSSSSSTS 574
              |    :|: ::|: |:||| ||  |    | |: |:|||
Db        538 RLQKKQRYMEIQETLKKAFSEDNLELGNSSLTDSTSSTS 576


RESULT 5
US-08-996-685-2
; Sequence 2, Application US/08996685
; Patent No. 6031153
;  GENERAL INFORMATION:
;    APPLICANT:  Ryals, John
;    APPLICANT:  Friedrich, Leslie
;    APPLICANT:  Uknes, Scott
;    APPLICANT:  Molina, Antonio
;    APPLICANT:  Ruess, Wilhelm
;    APPLICANT:  Knauf-Beiter, Gertrude
;    APPLICANT:  Kung, Ruth
;    APPLICANT:  Kessmann, Helmut
;    APPLICANT:  Oostendorp, Michael
;    TITLE OF INVENTION:  METHOD FOR PROTECTING PLANTS
;    NUMBER OF SEQUENCES:  32
;    CORRESPONDENCE ADDRESS:
;      ADDRESSEE:  No. 6031153artis Corporation
;      STREET:  3054 Cornwallis Road
;      CITY:  Research Triangle Park
;      STATE:  No. 6031153th Carolina
;      COUNTRY:  USA
;      ZIP:  27709
;    COMPUTER READABLE FORM:
;      MEDIUM TYPE:  Floppy disk
;      COMPUTER:  IBM PC compatible
;      OPERATING SYSTEM:  PC-DOS/MS-DOS
;      SOFTWARE:  PatentIn Release #1.0, Version #1.30
;    CURRENT APPLICATION DATA:
;      APPLICATION NUMBER:  US/08/996,685
;      FILING DATE:
;      CLASSIFICATION:
;    PRIOR APPLICATION DATA:
;      APPLICATION NUMBER:  US 08/761,543
;      FILING DATE:  6-DEC-1996
;    PRIOR APPLICATION DATA:
;      APPLICATION NUMBER:  US 60/034,378
;      FILING DATE:  27-DEC-1996
```

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;    PRIOR APPLICATION DATA:
;      APPLICATION NUMBER:  US 60/034,379
;      FILING DATE:  27-DEC-1996
;    PRIOR APPLICATION DATA:
;      APPLICATION NUMBER:  US 60/034,382
;      FILING DATE:  27-DEC-1996
;    PRIOR APPLICATION DATA:
;      APPLICATION NUMBER:  US 60/034,730
;      FILING DATE:  10-JAN-1997
;    PRIOR APPLICATION DATA:
;      APPLICATION NUMBER:  US 60/035,021
;      FILING DATE:  10-JAN-1997
;    PRIOR APPLICATION DATA:
;      APPLICATION NUMBER:  US 60/035,022
;      FILING DATE:  10-JAN-1997
;    PRIOR APPLICATION DATA:
;      APPLICATION NUMBER:  US 60/035,024
;      FILING DATE:  10-JAN-1997
;    PRIOR APPLICATION DATA:
;      APPLICATION NUMBER:  US 08/875,015
;      FILING DATE:  16-JUL-1997
;    ATTORNEY/AGENT INFORMATION:
;      NAME:  Meigs, J. Timothy
;      REGISTRATION NUMBER:  38,241
;      REFERENCE/DOCKET NUMBER:  PF/5-21215/P1/CGC1912
;    TELECOMMUNICATION INFORMATION:
;      TELEPHONE:  (919) 541-8587
;      TELEFAX:  (919) 541-8689
;  INFORMATION FOR SEQ ID NO:  2:
;    SEQUENCE CHARACTERISTICS:
;     LENGTH: 593 amino acids
;      TYPE:  amino acid
;      TOPOLOGY:  linear
;    MOLECULE TYPE:  protein
US-08-996-685-2

  Query Match           43.2%;  Score 1276;  DB 3;  Length 593;
  Best Local Similarity   47.2%;  Pred. No. 2.2e-121;
  Matches  273;  Conservative  113;  Mismatches  165;  Indels   28;  Gaps    9;

Qy          5 TSHVTNAFSDSDSASVEEGDADADADVEALRRLSDNLAAAFRSPEDFAFLADARIAVPGG 64
              || |    :||    :          || ||: |||:  : | ||:|  | :||:: :
Db         17 TSFVATDNTDSSIVYLAAEQVLTGPDVSALQLLSNSFESVFDSPDD--FYSDAKLVL--- 71

Qy         65 GGGGGDLRVHRCVLSARSPFLRGVFARRAAAAAGGGGEDGSERLELRELLGGGGEEVEVG 124
                 | ::  |||||||||  | :   |  ||          : :|||:|:     :: |||
Db         72 -SDGREVSFHRCVLSARSSFFKSALA--AAKKEKDSNNTAAVKLELKEI----AKDYEVG 124

Qy        125 YEALRLVLDYLYSGRVGDLPKAACLCVDEDCAHVGCHPAVAFMAQVLFAASTFQVAELTN 184
              ::::  || |:|| ||    ||     | ||:| || | ||| || :||: |  |:: ||
Db        125 FDSVVTVLAYVYSSRVRPPPKGVSECADENCCHVACRPAVDFMLEVLYLAFIFKIPELIT 184

Qy        185 LFQRRLLDVLDKVEVDNLLLILSVANLCNKSCMKLLERCLDMVVRSNLDMITLEKSLPPD 244
              |:|| ||||:||| ::: |:|| :||:| |:|||||:|| :::|:|:||::|||||| :
Db        185 LYQRHLLDVVDKVVIEDTLVILKLANICGKACMKLLDRCKEIIVKSNVDMVSLEKSLPEE 244

Qy        245 VIKQIIDARLSLGLISPENKGFPNKHVRRIHRALDSDDVELVRMLLTEGQTNLDDAFALH 304
              ::|:||| |  |||  |: |    |||  :|:||||||:|||::|| |  |||||| |||
Db        245 LVKEIIDRRKELGLEVPKVK----KHVSNVHKALDSDDIELVKLLLKEDHTNLDDACALH 300

Qy        305 YAVEHCDSKITTELLDLALADVNHRNPRGYTVLHIAARRREPKIIVSLLTKGARPADVTF 364
              :|| :|: |  |:|| |||||||||||||||||:|| |:|||::|:||| |||  :: |
Db        301 FAVAYCNVKTATDLLKLDLADVNHRNPRGYTVLHVAAMRKEPQLILSLLEKGASASEATL 360

Qy        365 DGRKAVQISKRLTKQGDYFGVTEEGKPSPKDRLCIEILEQAERRDPQLGEASVSLAMAGE 424
              :|| |: |:|: |   :   : |: | | | |||:||||| ::|:     :  | |:| :
Db        361 EGRTALMIAKQATMAVECNNIPEQCKHSLKGRLCVEILEQEDKREQIPRDVPPSFAVAAD 420

Qy        425 SLRGRLLYLENRVALARIMFPMEARVAMDIAQVDGTLEFNLGSGANPPPER----QRTTV 480
              |:  || ||||||||: :|| ||: ||:||:: || || : |     |:|    :||:
Db        421 ELKMTLLDLENRVALAQRLFPTEAQAAMEIAEMKGTCEFIVTS---LEPDRLTGTKRTSP 477

Qy        481 DLNESPFIMKEEHLARMTALSKTVELGKRFFPRCSNVLDKIMD-DETDPVSLGRDTSAEK 539
                :  :|| : ||| :|: |||||||||||||||| |||:||: ::   :: | | :|||
Db        478 GVKIAPFRILEEHQSRLKALSKTVELGKRFFPRCSAVLDQIMNCEDLTQLACGEDDTAEK 537

Qy        540 R----KRFHDLQDVLQKAFHEDKEENDRSGLSSSSSSTS 574
              |    :|: ::|: |:||| ||  |   | |: |:||||
Db        538 RLQKKQRYMEIQETLKKAFSEDNLELGNSSLTDSTSSTS 576


RESULT 6
US-08-880-179-3
; Sequence 3, Application US/08880179
; Patent No. 6091004
;  GENERAL INFORMATION:
;    APPLICANT:  Ryals, John
;    APPLICANT:  Delaney, Terry
;    APPLICANT:  Friedrich, Leslie
;    APPLICANT:  Weymann, Kristianna
;    APPLICANT:  Lawton, Kay
;    APPLICANT:  Ellis, Daniel
;    APPLICANT:  Uknes, Scott
;    APPLICANT:  Jesse, Taco
;    APPLICANT:  Vos, Pieter
;    TITLE OF INVENTION:  GENE ENCODING A PROTEIN INVOLVED IN THE
;    TITLE OF INVENTION:  SIGNAL TRANSDUCTION CASCADE LEADING TO SYSTEMIC ACQUIRED RESIS
;    TITLE OF INVENTION:  IN PLANTS
;    NUMBER OF SEQUENCES:  17
;    CORRESPONDENCE ADDRESS:
;      ADDRESSEE:  No. 6091004artis Corporation
;      STREET:  520 White Plains Road, P.O. Box 2005
;      CITY:  Tarrytown
;      STATE:  New York
;      COUNTRY:  USA
;      ZIP:  10591
;    COMPUTER READABLE FORM:
;      MEDIUM TYPE:  Floppy disk
;      COMPUTER:  IBM PC compatible
;      OPERATING SYSTEM:  PC-DOS/MS-DOS
;      SOFTWARE:  PatentIn Release #1.0, Version #1.30
;    CURRENT APPLICATION DATA:
;      APPLICATION NUMBER:  US/08/880,179
;      FILING DATE:
;      CLASSIFICATION:  800
;    ATTORNEY/AGENT INFORMATION:
;      NAME:  Meigs, J. Timothy
;      REGISTRATION NUMBER:  38,241
;      REFERENCE/DOCKET NUMBER:  CGC 1909
;    TELECOMMUNICATION INFORMATION:
;      TELEPHONE:  (919) 541-8587
;      TELEFAX:  (919) 541-8689
;  INFORMATION FOR SEQ ID NO:  3:
;    SEQUENCE CHARACTERISTICS:
;     LENGTH: 593 amino acids
;      TYPE:  amino acid
;      TOPOLOGY:  linear
;    MOLECULE TYPE:  protein
US-08-880-179-3

  Query Match           43.2%;  Score 1276;  DB 3;  Length 593;
  Best Local Similarity   47.2%;  Pred. No. 2.2e-121;
  Matches  273;  Conservative  113;  Mismatches  165;  Indels   28;  Gaps    9;

Qy          5 TSHVTNAFSDSDSASVEEGDADADADVEALRRLSDNLAAAFRSPEDFAFLADARIAVPGG 64
              || |    :||    :          || ||: ||::  : | ||:|  | :||:: :
Db         17 TSFVATDNTDSSIVYLAAEQVLTGPDVSALQLLSNSFESVFDSPDD--FYSDAKLVL--- 71

Qy         65 GGGGGDLRVHRCVLSARSPFLRGVFARRAAAAAGGGGEDGSERLELRELLGGGGEEVEVG 124
                 | ::  |||||||||  | :   |  ||          : :|||:|:     :: |||
Db         72 -SDGREVSFHRCVLSARSSFFKSALA--AAKKEKDSNNTAAVKLELKEI----AKDYEVG 124

Qy        125 YEALRLVLDYLYSGRVGDLPKAACLCVDEDCAHVGCHPAVAFMAQVLFAASTFQVAELTN 184
              ::::  || |:|| ||    ||     | ||:| || | ||| || :||: |  |:: ||
Db        125 FDSVVTVLAYVYSSRVRPPPKGVSECADENCCHVACRPAVDFMLEVLYLAFIFKIPELIT 184
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Qy        185 LFQRRLLDVLDKVEVDNLLLILSVANLCNKSCMKLLERCLDMVVRSNLDMITLEKSLPPD 244
              |:|| ||||:||| ::: |:|| :||:| |:|||||:|| :::|:||:||::|||||| :
Db        185 LYQRHLLDVVDKVVIEDTLVILKLANICGKACMKLLDRCKEIIVKSNVDMVSLEKSLPEE 244

Qy        245 VIKQIIDARLSLGLISPENKGFPNKHVRRIHRALDSDDVELVRMLLTEGQTNLDDAFALH 304
              ::|:||| |  |||  |: |    |||  :|:||||||:|||::|| |  ||||||
Db        245 LVKEIIDRRKELGLEVPKVK----KHVSNVHKALDSDDIELVKLLLKEDHTNLDDACALH 300

Qy        305 YAVEHCDSKITTELLDLALADVNHRNPRGYTVLHIAARRREPKIIVSLLTKGARPADVTF 364
              :|| :|: |  |:|| | |||||||||||||||:|| |:||::|:||| |||  :: |
Db        301 FAVAYCNVKTATDLLKLDLADVNHRNPRGYTVLHVAAMRKEPQLILSLLEKGASASEATL 360

Qy        365 DGRKAVQISKRLTKQGDYFGVTEEGKPSPKDRLCIEILEQAERRDPQLGEASVSLAMAGE 424
              :|| |: |:|: |   :  : |: | | | |||:||||| ::|:    :   | |:| :
Db        361 EGRTALMIAKQATMAVECNNIPEQCKHSLKGRLCVEILEQEDKREQIPRDVPPSFAVAAD 420

Qy        425 SLRGRLLYLENRVALARIMFPMEARVAMDIAQVDGTLEFNLGSGANPPPER----QRTTV 480
              |:  || |||||||: :|| ||: ||:||:: || || : |     |:|    :||:
Db        421 ELKMTLLDLENRVALAQRLFPTEAQAAMEIAEMKGTCEFIVTS---LEPDRLTGTKRTSP 477

Qy        481 DLNESPFIMKEEHLARMTALSKTVELGKRFFPRCSNVLDKIMD-DETDPVSLGRDTSAEK 539
              :  :|| : ||| :|: |||||||||||||||||| |||:||: ::   :: | | :|||
Db        478 GVKIAPFRILEEHQSRLKALSKTVELGKRFFPRCSAVLDQIMNCEDLTQLACGEDDTAEK 537

Qy        540 R----KRFHDLQDVLQKAFHEDKEENDRSGLSSSSSSTS 574
              |    :|: ::|: |:||| ||  |   | |: |:|||
Db        538 RLQKKQRYMEIQETLKKAFSEDNLELGNSSLTDSTSSTS 576
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RESULT 7
US-08-989-478-8
; Sequence 8, Application US/08989478
; Patent No. 5986082
; GENERAL INFORMATION:
; APPLICANT: Uknes, Scott
; APPLICANT: Hunt, Michelle
; APPLICANT: Steiner, Henry-York
; APPLICANT: Ryals, John
; TITLE OF INVENTION: ALTERED FORMS OF THE NIM1 GENE CONFERRING
; TITLE OF INVENTION: DISEASE RESISTANCE IN PLANTS
; NUMBER OF SEQUENCES: 32
; CORRESPONDENCE ADDRESS:
; ADDRESSEE: No. 5986082artis Corporation
; STREET: 3054 Cornwallis Road
; CITY: Research Triangle Park
; STATE: No. 5986082th Carolina
; COUNTRY: USA
; ZIP: 27709
; COMPUTER READABLE FORM:
; MEDIUM TYPE: Floppy disk
; COMPUTER: IBM PC compatible
; OPERATING SYSTEM: PC-DOS/MS-DOS
; SOFTWARE: PatentIn Release #1.0, Version #1.30
; CURRENT APPLICATION DATA:
; APPLICATION NUMBER: US/08/989,478
; FILING DATE:
; CLASSIFICATION:
; PRIOR APPLICATION DATA:
; APPLICATION NUMBER: US 60/033,177
; FILING DATE: 13-DEC-1996
; PRIOR APPLICATION DATA:
; APPLICATION NUMBER: US 60/034,379
; FILING DATE: 27-DEC-1996
; PRIOR APPLICATION DATA:
; APPLICATION NUMBER: US 60/034,382
; FILING DATE: 27-DEC-1996
; PRIOR APPLICATION DATA:
; APPLICATION NUMBER: US 60/034,730
; FILING DATE: 10-JAN-1997
; PRIOR APPLICATION DATA:
; APPLICATION NUMBER: US 60/035,021
; FILING DATE: 10-JAN-1997
; PRIOR APPLICATION DATA:
; APPLICATION NUMBER: US 60/035,022
; FILING DATE: 10-JAN-1997
; ATTORNEY/AGENT INFORMATION:
; NAME: Meigs, J. Timothy
; REGISTRATION NUMBER: 38,241
; REFERENCE/DOCKET NUMBER: PF/5-21214/P1/CGC1911
; TELECOMMUNICATION INFORMATION:
; TELEPHONE: (919) 541-8587
; TELEFAX: (919) 541-8689
; INFORMATION FOR SEQ ID NO: 8:
; SEQUENCE CHARACTERISTICS:
; LENGTH: 593 amino acids
; TYPE: amino acid
; TOPOLOGY: linear
; MOLECULE TYPE: protein
US-08-989-478-8

Query Match 43.0%; Score 1270; DB 2; Length 593;
Best Local Similarity 47.0%; Pred. No. 9e-121;
Matches 272; Conservative 113; Mismatches 166; Indels 28; Gaps 9;

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Qy          5 TSHVTNAFSDSDSASVEEGDADADADVEALRRLSDNLAAAFRSPEDFAFLADARIAVPGG 64
              || |    :||    :          || ||: ||::  | | :|:|  | :||:: :
Db         17 TSFVATDNTDSSIVYLAAEQVLTGPDVSALQLLSNSFEAVFDAPDD--FYSDAKLVL--- 71

Qy         65 GGGGGDLRVHRCVLSARSPPLRGVFARRAAAAAGGGGEDGSERLELRELLGGGGEEVEVG 124
                | ::  ||||||||| | :   |  ||           : :|||:|:     :: |||
Db         72 -SDGREVSFHRCVLSARSSFFKSALA--AAKKEKDSNNTAAVKLELKEI----AKDYEVG 124

Qy        125 YEALRLVLDYLYSGRVGDLPKAACLCVDEDCAHVGCHPAVAFMAQVLFAASTFQVAELTN 184
              ::::  || |:|| ||    ||     | ||:| || | ||| || :||: |  |:: ||
Db        125 FDSVVTVLAYVYSSRVRPPPKGVSECADENCCHVACRPAVDFMLEVLYLAFIFKIPELIT 184

Qy        185 LFQRRLLDVLDKVEVDNLLLILSVANLCNKSCMKLLERCLDMVVRSNLDMITLEKSLPPD 244
              |:|| ||||:||| ::: |:|| :||:| |:|||||:|| :::|:||:||::|||||| :
Db        185 LYQRHLLDVVDKVVIEDTLVILKLANICGKACMKLLDRCKEIIVKSNVDMVSLEKSLPEE 244

Qy        245 VIKQIIDARLSLGLISPENKGFPNKHVRRIHRALDSDDVELVRMLLTEGQTNLDDAFALH 304
              ::|:||| |  |||  |: |    |||  :|:||||||:|||::|| |  ||||||
Db        245 LVKEIIDRRKELGLEVPKVK----KHVSNVHKALDSDDIELVKLLLKEDHTNLDDACALH 300

Qy        305 YAVEHCDSKITTELLDLALADVNHRNPRGYTVLHIAARRREPKIIVSLLTKGARPADVTF 364
              :|| :|: |  |:|| | |||||||||||||||:|| |:||::|:||| |||  :: |
Db        301 FAVAYCNVKTATDLLKLDLADVNHRNPRGYTVLHVAAMRKEPQLILSLLEKGASASEATL 360

Qy        365 DGRKAVQISKRLTKQGDYFGVTEEGKPSPKDRLCIEILEQAERRDPQLGEASVSLAMAGE 424
              :|| |: |:|: |   :  : |: | | | |||:||||| ::|:    :   | |:| :
Db        361 EGRTALMIAKQATMAVECNNIPEQCKHSLKGRLCVEILEQEDKREQIPRDVPPSFAVAAD 420

Qy        425 SLRGRLLYLENRVALARIMFPMEARVAMDIAQVDGTLEFNLGSGANPPPER----QRTTV 480
              |:  || |||||||: :|| ||: ||:||:: || || : |     |:|    :||:
Db        421 ELKMTLLDLENRVALAQRLFPTEAQAAMEIAEMKGTCEFIVTS---LEPDRLTGTKRTSP 477

Qy        481 DLNESPFIMKEEHLARMTALSKTVELGKRFFPRCSNVLDKIMD-DETDPVSLGRDTSAEK 539
              :  :|| : ||| :|: |||||||||||||||||| |||:||: ::   :: | | :|||
Db        478 GVKIAPFRILEEHQSRLKALSKTVELGKRFFPRCSAVLDQIMNCEDLTQLACGEDDTAEK 537

Qy        540 R----KRFHDLQDVLQKAFHEDKEENDRSGLSSSSSSTS 574
              |    :|: ::|: |:||| ||  |   | |: |:|||
Db        538 RLQKKQRYMEIQETLKKAFSEDNLELGNLSLTDSTSSTS 576
```

RESULT 8
US-08-996-685-8
; Sequence 8, Application US/08996685
; Patent No. 6031153
; GENERAL INFORMATION:
; APPLICANT: Ryals, John
; APPLICANT: Friedrich, Leslie
; APPLICANT: Uknes, Scott
; APPLICANT: Molina, Antonio
; APPLICANT: Ruess, Wilhelm
; APPLICANT: Knauf-Beiter, Gertrude

```
;    APPLICANT:  Kung, Ruth
;    APPLICANT:  Kessmann, Helmut
;    APPLICANT:  Oostendorp, Michael
;    TITLE OF INVENTION:  METHOD FOR PROTECTING PLANTS
;    NUMBER OF SEQUENCES:  32
;    CORRESPONDENCE ADDRESS:
;      ADDRESSEE:  No. 6031153artis Corporation
;      STREET:  3054 Cornwallis Road
;      CITY:  Research Triangle Park
;      STATE:  No. 6031153th Carolina
;      COUNTRY:  USA
;      ZIP:  27709
;    COMPUTER READABLE FORM:
;      MEDIUM TYPE:  Floppy disk
;      COMPUTER:  IBM PC compatible
;      OPERATING SYSTEM:  PC-DOS/MS-DOS
;      SOFTWARE:  PatentIn Release #1.0, Version #1.30
;    CURRENT APPLICATION DATA:
;      APPLICATION NUMBER:  US/08/996,685
;      FILING DATE:
;      CLASSIFICATION:
;    PRIOR APPLICATION DATA:
;      APPLICATION NUMBER:  US 08/761,543
;      FILING DATE:  6-DEC-1996
;    PRIOR APPLICATION DATA:
;      APPLICATION NUMBER:  US 60/034,378
;      FILING DATE:  27-DEC-1996
;    PRIOR APPLICATION DATA:
;      APPLICATION NUMBER:  US 60/034,379
;      FILING DATE:  27-DEC-1996
;    PRIOR APPLICATION DATA:
;      APPLICATION NUMBER:  US 60/034,382
;      FILING DATE:  27-DEC-1996
;    PRIOR APPLICATION DATA:
;      APPLICATION NUMBER:  US 60/034,730
;      FILING DATE:  10-JAN-1997
;    PRIOR APPLICATION DATA:
;      APPLICATION NUMBER:  US 60/035,021
;      FILING DATE:  10-JAN-1997
;    PRIOR APPLICATION DATA:
;      APPLICATION NUMBER:  US 60/035,022
;      FILING DATE:  10-JAN-1997
;    PRIOR APPLICATION DATA:
;      APPLICATION NUMBER:  US 60/035,024
;      FILING DATE:  10-JAN-1997
;    PRIOR APPLICATION DATA:
;      APPLICATION NUMBER:  US 08/875,015
;      FILING DATE:  16-JUL-1997
;    ATTORNEY/AGENT INFORMATION:
;      NAME:  Meigs, J. Timothy
;      REGISTRATION NUMBER:  38,241
;      REFERENCE/DOCKET NUMBER:  PF/5-21215/P1/CGC1912
;    TELECOMMUNICATION INFORMATION:
;      TELEPHONE:  (919) 541-8587
;      TELEFAX:  (919) 541-8689
;  INFORMATION FOR SEQ ID NO:  8:
;    SEQUENCE CHARACTERISTICS:
;     LENGTH: 593 amino acids
;      TYPE:  amino acid
;      TOPOLOGY:  linear
;    MOLECULE TYPE:  protein
US-08-996-685-8

  Query Match             43.0%;  Score 1270;  DB 3;  Length 593;
  Best Local Similarity   47.0%;  Pred. No. 9e-121;
  Matches  272;  Conservative  113;  Mismatches  166;  Indels   28;  Gaps    9;

Qy          5 TSHVTNAFSDSDSASVEEGDADADADVEALRRLSDNLAAAFRSPEDFAFLADARIAVPGG 64
              || |    :||    :          || ||: ||::  | | :|:|  | :||:: :
Db         17 TSFVATDNTDSSIVYLAAEQVLTGPDVSALQLLSNSFEAVFDAPDD--FYSDAKLVL--- 71

Qy         65 GGGGGDLRVHRCVLSARSPFLRGVFARRAAAAAGGGGEDGSERLELRELLGGGGEEVEVG 124
                  | ::  |||||||||| | :   |  ||          : :|||:|:     :: |||
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Db         72 -SDGREVSFHRCVLSARSSFFKSALA--AAKKEKDSNNTAAVKLELKEI----AKDYEVG 124

Qy        125 YEALRLVLDYLYSGRVGDLPKAACLCVDEDCAHVGCHPAVAFMAQVLFAASTFQVAELTN 184
              ::::  || |:|| ||    ||     | ||:| || | ||| || :||: |  |:: ||
Db        125 FDSVVTVLAYVYSSRVRPPPKGVSECADENCCHVACRPAVDFMLEVLYLAFIFKIPELIT 184

Qy        185 LFQRRLLDVLDKVEVDNLLLILSVANLCNKSCMKLLERCLDMVVRSNLDMITLEKSLPPD 244
              |:|| ||||:||| ::: |:|| :||:| |:|||||:|| :::|:|||:|||::|||||| :
Db        185 LYQRHLLDVVDKVVIEDTLVILKLANICGKACMKLLDRCKEIIVKSNVDMVSLEKSLPEE 244

Qy        245 VIKQIIDARLSLGLISPENKGFPNKHVRRIHRALDSDDVELVRMLLTEGQTNLDDAFALH 304
              ::|:||| |  |||  |: |    |||  :|:|||||||:|||::|| |  |||||| |||
Db        245 LVKEIIDRRKELGLEVPKVK----KHVSNVHKALDSDDIELVKLLLKEDHTNLDDACALH 300

Qy        305 YAVEHCDSKITTELLDLALADVNHRNPRGYTVLHIAARRREPKIIVSLLTKGARPADVTF 364
              :|| :|: |  |:|| | |||||||||||||||:|| |:||::|:||| |||  :: |
Db        301 FAVAYCNVKTATDLLKLDLADVNHRNPRGYTVLHVAAMRKEPQLILSLLEKGASASEATL 360

Qy        365 DGRKAVQISKRLTKQGDYFGVTEEGKPSPKDRLCIEILEQAERRDPQLGEASVSLAMAGE 424
              :|| |: |:|: |   :   : |: | | | |||:||||| ::|:    :   | |:| :
Db        361 EGRTALMIAKQATMAVECNNIPEQCKHSLKGRLCVEILEQEDKREQIPRDVPPSFAVAAD 420

Qy        425 SLRGRLLYLENRVALARIMFPMEARVAMDIAQVDGTLEFNLGSGANPPPER----QRTTV 480
              |:  || |||||||: :|| ||: ||:||:: || || : |      |:|     :||:
Db        421 ELKMTLLDLENRVALAQRLFPTEAQAAMEIAEMKGTCEFIVTS---LEPDRLTGTKRTSP 477

Qy        481 DLNESPFIMKEEHLARMTALSKTVELGKRFFPRCSNVLDKIMD-DETDPVSLGRDTSAEK 539
              :  :|| : ||| :|: |||||||||||||||| |||:||: ::   :: | | :|||
Db        478 GVKIAPFRILEEHQSRLKALSKTVELGKRFFPRCSAVLDQIMNCEDLTQLACGEDDTAEK 537

Qy        540 R----KRFHDLQDVLQKAFHEDKEENDRSGLSSSSSSTS 574
              |    :|: ::|: |:||| ||  |      |: |:|||
Db        538 RLQKKQRYMEIQETLKKAFSEDNLELGNLSLTDSTSSTS 576


RESULT 9
US-09-519-232-6
; Sequence 6, Application US/09519232
; Patent No. 6528702
; GENERAL INFORMATION:
;  APPLICANT: Salmeron, John
;  APPLICANT: Weislo, Laura
;  APPLICANT: Willits, Michael
;  APPLICANT: Mengiste, Tesfaye
;  TITLE OF INVENTION: NOVEL PLANT GENES AND USES THEREOF
;  FILE REFERENCE: S-30857A/RTP2095
;  CURRENT APPLICATION NUMBER: US/09/519,232
;  CURRENT FILING DATE: 2000-03-06
;  NUMBER OF SEQ ID NOS: 74
;  SOFTWARE: PatentIn Ver. 2.1
; SEQ ID NO 6
;   LENGTH: 579
;   TYPE: PRT
;   ORGANISM: Brassica napus
US-09-519-232-6

  Query Match             41.4%;  Score 1222.5;  DB 4;  Length 579;
  Best Local Similarity   45.9%;  Pred. No. 6.2e-116;
  Matches  260;  Conservative  110;  Mismatches  160;  Indels   37;  Gaps   10;

Qy         14 DSDSASVEEGDADADADVEALRRLSDNLAAAFRSPEDFAFLADARIAVPGGGGGGGDLRV 73
              :| |::|   :     :| | : ||::| : | |||  || :|||: :      ::
Db         27 NSGGSSTVXPTELXTRPEVSAFQLLSNSLESVFDSPE--AFYSDAKLVL----SDDKEVSF 80

Qy         74 HRCVLSARSPFLRGVFARRAAAAAGGGGEDGSERLELRELLGGGGEEVEVGYEALRLVLD 133
              |||:|||||     :| : |  ||     :    :|||: |       | :||:::: ||
Db         81 HRCILSARS-----LFFKAALXAAEKVQKSTPVKLELKTL----AAEYDVGFDSVVAVLA 131

Qy        134 YLYSGRVGDLPKAACLCVDEDCAHVGCHPAVAFMAQVLFAASTFQVAELTNLFQRRLLDV 193
              |:|||||   ||    | |  | || | ||| || :||: |  ||: ||  ::|| ||||
Db        132 YVYSGRVRPPPKGVSECADXSCCHVACRPAVDFMVEVLYLAFVFQIQELVTMYQRHLLDV 191

Qy        194 LDKVEVDNLLLILSVANLCNKSCMKLLERCLDMVVRSNLDMITLEKSLPPDVIKQIIDAR 253
```

```
                :||| ::: |::| :||:| |:| || ::| :::|:||:|::||:|||| : ||:|| |
Db        192 VDKVXIEDTLVVLKLANICGKACKKLFDKCREIIVKSNVDVVTLKKSLPEXIAKQVIDIR 251

Qy        254 LSLGLISPENKGFPNKHVRRIHRALDSDDVELVRMLLTEGQTNLDDAFALHYAVEHCDSK 313
              |||   |    | |||  ||:||:|||::|| ||| || ||||:|:|||:|| :|| |
Db        252 KELGLEVAE----PEKHVSNIHKALESDDLDLVVMLLKEGHTNLDEAYALHFAVAYCDEK 307

Qy        314 ITTELLDLALADVNHRNPRGYTVLHIAARRREPKIIVSLLTKGARPADVTFDGRKAVQIS 373
                ||:|  |||| |||||||:|:|| |:|| :|  ||||||   ::: ||| |: |:
Db        308 TARNLLELGFADVNRRNPRGYTVIHVAAMRKEPTLIALLLTKGANALEMSLDGRTALLIA 367

Qy        374 KRLTKQGDYFGVTEEGKPSPKDRLCIEILEQAER-RDPQLGEASVSLAMAGESLRGRLLY 432
              |::||  :   : |:|| : |  :|:|||:| :  |:|   : | |||:| :  : ||:
Db        368 KQVTKAAECC-ILEKGKLAAKGGVCVEILKQPDNTREPFPEDVSPSLAVAADQFKIRLID 426

Qy        433 LENRVALARIMFPMEARVAMDIAQVDGTLEFNLGSGANPPPERQRTTVDLNESPFIMKEE 492
              ||||| :|| ::|||:|||| |:: || || :           |  ||:  ||   |
Db        427 LENRVQMARCLYPMEAQVAMDFARMKGTREFVV----------TTATDLHMEPFKFVEM 475

Qy        493 HLARMTALSKTVELGKRFFPRCSNVLDKIMDDE--TDPVSLGRDT---SAEKRKRFHDLQ 547
              | :|:|||||||| |||||||| ||| |:| |  |    :  ||     :||:|| ::|
Db        476 HQSRLTALSKTVEFGKRFFPRCSKVLDDIVDSEDLTILALVEEDTPEQRQQKRQRFMEIQ 535

Qy        548 DVLQKAFHEDKEENDRSGLSSSSSSTS 574
              :::| || :|||:  :| ||:||||||
Db        536 EIVQMAFSKDKEDLGKSSLSASSSSTS 562
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RESULT 10
US-09-519-232-20
; Sequence 20, Application US/09519232
; Patent No. 6528702
; GENERAL INFORMATION:
; APPLICANT: Salmeron, John
; APPLICANT: Weislo, Laura
; APPLICANT: Willits, Michael
; APPLICANT: Mengiste, Tesfaye
; TITLE OF INVENTION: NOVEL PLANT GENES AND USES THEREOF
; FILE REFERENCE: S-30857A/RTP2095
; CURRENT APPLICATION NUMBER: US/09/519,232
; CURRENT FILING DATE: 2000-03-06
; NUMBER OF SEQ ID NOS: 74
; SOFTWARE: PatentIn Ver. 2.1
; SEQ ID NO 20
; LENGTH: 600
; TYPE: PRT
; ORGANISM: Arabidopsis thaliana
US-09-519-232-20

Query Match 41.1%; Score 1213.5; DB 4; Length 600;
Best Local Similarity 45.8%; Pred. No. 5.4e-115;
Matches 277; Conservative 105; Mismatches 172; Indels 51; Gaps 17;

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Qy          1 MEPPTSHVTNAFSDSDSASVEEGD----ADADAD----------VEALRRLSDNLAAAFR 46
              |   |:  |  ||||   |   |:    |::  |          | ||: ||: | : |
Db          1 MATTTTTTTARFSDSYEFSNTSGNSFFAAESSLDYPTEFLTPPEVSALKLLSNCLESVFD 60

Qy         47 SPEDFAFLADARIAVPGGGGGGGDLRVHRCVLSARSPFLRGVFARRAAAAAGGGGEDGSE 106
              |||   | :||:: :     || ::  |||:|||| |    || : | |         :
Db         61 SPE--TFYSDAKLVL----AGGREVSFHRCILSARIP----VF-KSALATVKEQKSSTTV 109

Qy        107 RLELRELLGGGGEEVEVGYEALRLVLDYLYSGRVGDLPKAACLCVDEDCAHVGCHPAVAF 166
              :|:|:|:      : |||:::  || |:|||||   || |  |||:|| || |   | |
Db        110 KLQLKEI----ARDYEVGFDSVVAVLAYVYSGRVRSPPKGASACVDDDCCHVACRSKVDF 165

Qy        167 MAQVLFAASTFQVAELTNLFQRRLLDVLDKVEVDNLLLILSVANLCNKSCMKLLERCLDM 226
              | :||: :  ||: ||  |::|: |:::||| |:::|:|  :  ||  :  |||:||:::
Db        166 MVEVLYLSFVFQIQELVTLYERQFLEIVDKVVVEDILVIFKLDTLCGTTYKKLLDRCIEI 225

Qy        227 VVRSNLDMITLEKSLPPDVIKQIIDARLSLGLISPENKGFPNKHVRRIHRALDSDDVELV 286
              :|:|:::::|||||  : ||||| | :| |  |: :    :||: |::|||||||||
Db        226 IVKSDIELVSLEKSLPQHIFKQIIDIREALCLEPPKLE----RHVKNIYKALDSDDVELV 281

Qy        287 RMLLTEGQTNLDDAFALHYAVEHCDSKITTELLDLALADVNHRNPRGYTVLHIAARRREP 346
              :||| || ||||:|:|||:|: ||  |   :||:| ||||| |||||||||:|| |:||
Db        282 KMLLLEGHTNLDEAYALHFAIAHCAVKTAYDLLELELADVNLRNPRGYTVLHVAAMRKEP 341

Qy        347 KIIVSLLTKGARPADVTFDGRKAVQISKRLTKQGDYFGVTEEGKPSPKDRLCIEILEQAE 406
              |:|:||| |||   | | ||| |: | |||||  ||   ||:| || |  ||||:||  |
Db        342 KLIISLLMKGANILDTTLDGRTALVIVKRLTKADDYKTSTEDGTPSLKGGLCIEVLEH-E 400

Qy        407 RRDPQLG--EASVSLAMAGESLRGRLLYLENRVALARIMFPMEARVAMDIAQVDGTLEFN 464
              ::   |   |||:|| :  | || |||| ||||||||::||:|      ||::: | ||
Db        401 QKLEYLSPIEASLSLPVTPEELRMRLLYYENRVALARLLFPVETETVQGIAKLEETCEFT 460

Qy        465 LGSGANPPPE--RQRTTVDLNESPFIMKEEHLARMTALSKTVELGKRFFPRCSNVLDKIM 522
              |   |      :||::||| :|| : |:||:|: || ||||||||:| |||  ||  |
Db        461 -ASSLEPDHHIGEKRTSLDLNMAPFQIHEKHLSRLRALCKTVELGKRYFKRCS--LDHFM 517

Qy        523 DDE--TDPVSLGRDT---SAEKRKRFHDLQDVLQKAFHEDKEENDRSGLSSSSSSTSIGA 577
              | |      |:  ||     :|::|: :||: | | | |||||    | ||:   || |
Db        518 DTEDLNHLASVEEDTPEKRLQKKQRYMELQETLMKTFSEDKEE---CGKSSTPKPTS--A 572

Qy        578 IRPRR 582
              :|  |
Db        573 VRSNR 577
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RESULT 11
US-09-519-232-72
; Sequence 72, Application US/09519232
; Patent No. 6528702
; GENERAL INFORMATION:
; APPLICANT: Salmeron, John
; APPLICANT: Weislo, Laura
; APPLICANT: Willits, Michael
; APPLICANT: Mengiste, Tesfaye
; TITLE OF INVENTION: NOVEL PLANT GENES AND USES THEREOF
; FILE REFERENCE: S-30857A/RTP2095
; CURRENT APPLICATION NUMBER: US/09/519,232
; CURRENT FILING DATE: 2000-03-06
; NUMBER OF SEQ ID NOS: 74
; SOFTWARE: PatentIn Ver. 2.1
; SEQ ID NO 72
; LENGTH: 601
; TYPE: PRT
; ORGANISM: Arabidopsis thaliana
US-09-519-232-72

Query Match 41.1%; Score 1213.5; DB 4; Length 601;
Best Local Similarity 45.8%; Pred. No. 5.5e-115;
Matches 277; Conservative 105; Mismatches 172; Indels 51; Gaps 17;

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Qy          1 MEPPTSHVTNAFSDSDSASVEEGD----ADADAD----------VEALRRLSDNLAAAFR 46
              |   |:  |  ||||   |   |:    |::  |          | ||: ||: | : |
Db          2 MATTTTTTTARFSDSYEFSNTSGNSFFAAESSLDYPTEFLTPPEVSALKLLSNCLESVFD 61

Qy         47 SPEDFAFLADARIAVPGGGGGGGDLRVHRCVLSARSPFLRGVFARRAAAAAGGGGEDGSE 106
              |||   | :||:: :     || ::  |||:|||| |    || : | |         :
Db         62 SPE--TFYSDAKLVL----AGGREVSFHRCILSARIP----VF-KSALATVKEQKSSTTV 110

Qy        107 RLELRELLGGGGEEVEVGYEALRLVLDYLYSGRVGDLPKAACLCVDEDCAHVGCHPAVAF 166
              .|:|:|:      : |||:::  || |:|||||   || |  |||:|| || |   | |
Db        111 KLQLKEI----ARDYEVGFDSVVAVLAYVYSGRVRSPPKGASACVDDDCCHVACRSKVDF 166

Qy        167 MAQVLFAASTFQVAELTNLFQRRLLDVLDKVEVDNLLLILSVANLCNKSCMKLLERCLDM 226
              | :||: :  ||: ||  |::|: |:::||| |:::|:|  :  ||  :  |||:||:::
Db        167 MVEVLYLSFVFQIQELVTLYERQFLEIVDKVVVEDILVIFKLDTLCGTTYKKLLDRCIEI 226

Qy        227 VVRSNLDMITLEKSLPPDVIKQIIDARLSLGLISPENKGFPNKHVRRIHRALDSDDVELV 286
              :|:|:::::|||||  : ||||| | :| |  |: :    :||: |::|||||||||
Db        227 IVKSDIELVSLEKSLPQHIFKQIIDIREALCLEPPKLE----RHVKNIYKALDSDDVELV 282

Qy        287 RMLLTEGQTNLDDAFALHYAVEHCDSKITTELLDLALADVNHRNPRGYTVLHIAARRREP 346
              :||| || ||||:|:|||:|: ||  |   :||:| ||||| |||||||||:|| |:||
Db        283 KMLLLEGHTNLDEAYALHFAIAHCAVKTAYDLLELELADVNLRNPRGYTVLHVAAMRKEP 342
```

```
Qy        347 KIIVSLLTKGARPADVTFDGRKAVQISKRLTKQGDYFGVTEEGKPSPKDRLCIEILEQAE 406
              |:|:||| |||   | | ||| |: | |||||  ||   ||:| || |  ||||:||  |
Db        343 KLIISLLMKGANILDTTLDGRTALVIVKRLTKADDYKTSTEDGTPSLKGGLCIEVLEH-E 401

Qy        407 RRDPQLG--EASVSLAMAGESLRGRLLYLENRVALARIMFPMEARVAMDIAQVDGTLEFN 464
              ::   |   |||:|| :  | || |||| ||||||||::||:|      ||::: | ||
Db        402 QKLEYLSPIEASLSLPVTPEELRMRLLYYENRVALARLLFPVETETVQGIAKLEETCEFT 461

Qy        465 LGSGANPPPE--RQRTTVDLNESPFIMKEEHLARMTALSKTVELGKRFFPRCSNVLDKIM 522
              |  |     :||::||| :|| : |:||:|: || ||||||||:| |||  ||  |
Db        462 -ASSLEPDHHIGEKRTSLDLNMAPFQIHEKHLSRLRALCKTVELGKRYFKRCS--LDHFM 518

Qy        523 DDE--TDPVSLGRDT---SAEKRKRFHDLQDVLQKAFHEDKEENDRSGLSSSSSSTSIGA 577
              | |       |:  ||     :|::|: :||: | | | |||||    | ||:   ||  |
Db        519 DTEDLNHLASVEEDTPEKRLQKKQRYMELQETLMKTFSEDKEE---CGKSSTPKPTS--A 573

Qy        578 IRPRR 582
              :|  |
Db        574 VRSNR 578
```

```
RESULT 12
US-08-989-478-12
; Sequence 12, Application US/08989478
; Patent No. 5986082
;  GENERAL INFORMATION:
;    APPLICANT:  Uknes, Scott
;    APPLICANT:  Hunt, Michelle
;    APPLICANT:  Steiner, Henry-York
;    APPLICANT:  Ryals, John
;    TITLE OF INVENTION:  ALTERED FORMS OF THE NIM1 GENE CONFERRING
;    TITLE OF INVENTION:  DISEASE RESISTANCE IN PLANTS
;    NUMBER OF SEQUENCES:  32
;    CORRESPONDENCE ADDRESS:
;      ADDRESSEE:  No. 5986082artis Corporation
;      STREET:  3054 Cornwallis Road
;      CITY:  Research Triangle Park
;      STATE:  No. 5986082th Carolina
;      COUNTRY:  USA
;      ZIP:  27709
;    COMPUTER READABLE FORM:
;      MEDIUM TYPE:  Floppy disk
;      COMPUTER:  IBM PC compatible
;      OPERATING SYSTEM:  PC-DOS/MS-DOS
;      SOFTWARE:  PatentIn Release #1.0, Version #1.30
;    CURRENT APPLICATION DATA:
;      APPLICATION NUMBER:  US/08/989,478
;      FILING DATE:
;      CLASSIFICATION:
;    PRIOR APPLICATION DATA:
;      APPLICATION NUMBER:  US 60/033,177
;      FILING DATE:  13-DEC-1996
;    PRIOR APPLICATION DATA:
;      APPLICATION NUMBER:  US 60/034,379
;      FILING DATE:  27-DEC-1996
;    PRIOR APPLICATION DATA:
;      APPLICATION NUMBER:  US 60/034,382
;      FILING DATE:  27-DEC-1996
;    PRIOR APPLICATION DATA:
;      APPLICATION NUMBER:  US 60/034,730
;      FILING DATE:  10-JAN-1997
;    PRIOR APPLICATION DATA:
;      APPLICATION NUMBER:  US 60/035,021
;      FILING DATE:  10-JAN-1997
;    PRIOR APPLICATION DATA:
;      APPLICATION NUMBER:  US 60/035,022
;      FILING DATE:  10-JAN-1997
;    ATTORNEY/AGENT INFORMATION:
;      NAME:  Meigs, J. Timothy
;      REGISTRATION NUMBER:  38,241
;      REFERENCE/DOCKET NUMBER:  PF/5-21214/P1/CGC1911
;    TELECOMMUNICATION INFORMATION:
;      TELEPHONE:  (919) 541-8587
;      TELEFAX:  (919) 541-8689
;  INFORMATION FOR SEQ ID NO:  12:
;    SEQUENCE CHARACTERISTICS:
;     LENGTH: 521 amino acids
;      TYPE:  amino acid
;      TOPOLOGY:  linear
;    MOLECULE TYPE:  protein
US-08-989-478-12

  Query Match             40.3%;  Score 1188.5;  DB 2;  Length 521;
  Best Local Similarity   48.0%;  Pred. No. 1.5e-112;
  Matches  251;  Conservative  100;  Mismatches  149;  Indels   23;  Gaps    7;

Qy          5 TSHVTNAFSDSDSASVEEGDADADADVEALRRLSDNLAAAFRSPEDFAFLADARIAVPGG 64
              || |    :||    :          || ||: ||::  : | ||:|  | :||:: :
Db         17 TSFVATDNTDSSIVYLAAEQVLTGPDVSALQLLSNSFESVFDSPDD--FYSDAKLVL--- 71

Qy         65 GGGGGDLRVHRCVLSARSPFLRGVFARRAAAAAGGGGEDGSERLELRELLGGGGEEVEVG 124
                | ::  |||||||||| | :   |  ||          : :|||:|:     :: |||
Db         72 -SDGREVSFHRCVLSARSSFFKSALA--AAKKEKDSNNTAAVKLELKEI----AKDYEVG 124

Qy        125 YEALRLVLDYLYSGRVGDLPKAACLCVDEDCAHVGCHPAVAFMAQVLFAASTFQVAELTN 184
              ::::  || |:|| ||   ||    | ||:| || | ||| || :||: |  |:: ||
Db        125 FDSVVTVLAYVYSSRVRPPPKGVSECADENCCHVACRPAVDFMLEVLYLAFIFKIPELIT 184

Qy        185 LFQRRLLDVLDKVEVDNLLLILSVANLCNKSCMKLLERCLDMVVRSNLDMITLEKSLPPD 244
              |:|| ||||:||| ::: |:|| :||:| |:|||||:|| :::|:||:||::|||||| :
Db        185 LYQRHLLDVVDKVVIEDTLVILKLANICGKACMKLLDRCKEIIVKSNVDMVSLEKSLPEE 244

Qy        245 VIKQIIDARLSLGLISPENKGFPNKHVRRIHRALDSDDVELVRMLLTEGQTNLDDAFALH 304
              ::|:||| |  |||  |: |    |||  :|:|||||:|||::|| |  ||||| |||
Db        245 LVKEIIDRRKELGLEVPKVK----KHVSNVHKALDSDDIELVKLLLKEDHTNLDDACALH 300

Qy        305 YAVEHCDSKITTELLDLALADVNHRNPRGYTVLHIAARRREPKIIVSLLTKGARPADVTF 364
              :|| :|: |  |:|| | |||||||||||||||:|| |:||::|:||| |||  :: |
Db        301 FAVAYCNVKTATDLLKLDLADVNHRNPRGYTVLHVAAMRKEPQLILSLLEKGASASEATL 360

Qy        365 DGRKAVQISKRLTKQGDYFGVTEEGKPSPKDRLCIEILEQAERRDPQLGEASVSLAMAGE 424
              :|| |: |:|: |   :  : |: | | | |||:|||| ::|:   :  | |:| :
Db        361 EGRTALMIAKQATMAVECNNIPEQCKHSLKGRLCVEILEQEDKREQIPRDVPPSFAVAAD 420

Qy        425 SLRGRLLYLENRVALARIMFPMEARVAMDIAQVDGTLEFNLGSGANPPPER----QRTTV 480
              |:  || |||||||: :|| ||: ||:||:: || || : |     |:|    :||:
Db        421 ELKMTLLDLENRVALAQRLFPTEAQAAMEIAEMKGTCEFIVTS---LEPDRLTGTKRTSP 477

Qy        481 DLNESPFIMKEEHLARMTALSKTVELGKRFFPRCSNVLDKIMD 523
              :  :|| : ||| :|: |||||||||||||||| |||:||:
Db        478 GVKIAPFRILEEHQSRLKALSKTVELGKRFFPRCSAVLDQIMN 520
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```
RESULT 13
US-08-996-685-12
; Sequence 12, Application US/08996685
; Patent No. 6031153
;  GENERAL INFORMATION:
;    APPLICANT:  Ryals, John
;    APPLICANT:  Friedrich, Leslie
;    APPLICANT:  Uknes, Scott
;    APPLICANT:  Molina, Antonio
;    APPLICANT:  Ruess, Wilhelm
;    APPLICANT:  Knauf-Beiter, Gertrude
;    APPLICANT:  Kung, Ruth
;    APPLICANT:  Kessmann, Helmut
;    APPLICANT:  Oostendorp, Michael
;    TITLE OF INVENTION:  METHOD FOR PROTECTING PLANTS
;    NUMBER OF SEQUENCES:  32
;    CORRESPONDENCE ADDRESS:
;      ADDRESSEE:  No. 6031153artis Corporation
;      STREET:  3054 Cornwallis Road
;      CITY:  Research Triangle Park
;      STATE:  No. 6031153th Carolina
;      COUNTRY:  USA
```

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;       ZIP:  27709
;     COMPUTER READABLE FORM:
;       MEDIUM TYPE:  Floppy disk
;       COMPUTER:  IBM PC compatible
;       OPERATING SYSTEM:  PC-DOS/MS-DOS
;       SOFTWARE:  PatentIn Release #1.0, Version #1.30
;     CURRENT APPLICATION DATA:
;       APPLICATION NUMBER:  US/08/996,685
;       FILING DATE:
;       CLASSIFICATION:
;     PRIOR APPLICATION DATA:
;       APPLICATION NUMBER:  US 08/761,543
;       FILING DATE:  6-DEC-1996
;     PRIOR APPLICATION DATA:
;       APPLICATION NUMBER:  US 60/034,378
;       FILING DATE:  27-DEC-1996
;     PRIOR APPLICATION DATA:
;       APPLICATION NUMBER:  US 60/034,379
;       FILING DATE:  27-DEC-1996
;     PRIOR APPLICATION DATA:
;       APPLICATION NUMBER:  US 60/034,382
;       FILING DATE:  27-DEC-1996
;     PRIOR APPLICATION DATA:
;       APPLICATION NUMBER:  US 60/034,730
;       FILING DATE:  10-JAN-1997
;     PRIOR APPLICATION DATA:
;       APPLICATION NUMBER:  US 60/035,021
;       FILING DATE:  10-JAN-1997
;     PRIOR APPLICATION DATA:
;       APPLICATION NUMBER:  US 60/035,022
;       FILING DATE:  10-JAN-1997
;     PRIOR APPLICATION DATA:
;       APPLICATION NUMBER:  US 60/035,024
;       FILING DATE:  10-JAN-1997
;     PRIOR APPLICATION DATA:
;       APPLICATION NUMBER:  US 08/875,015
;       FILING DATE:  16-JUL-1997
;     ATTORNEY/AGENT INFORMATION:
;       NAME:  Meigs, J. Timothy
;       REGISTRATION NUMBER:  38,241
;       REFERENCE/DOCKET NUMBER:  PF/5-21215/P1/CGC1912
;     TELECOMMUNICATION INFORMATION:
;       TELEPHONE:  (919) 541-8587
;       TELEFAX:  (919) 541-8689
;   INFORMATION FOR SEQ ID NO:  12:
;     SEQUENCE CHARACTERISTICS:
;      LENGTH: 521 amino acids
;       TYPE:  amino acid
;       TOPOLOGY:  linear
;     MOLECULE TYPE:  protein
US-08-996-685-12

  Query Match             40.3%;  Score 1188.5;  DB 3;  Length 521;
  Best Local Similarity   48.0%;  Pred. No. 1.5e-112;
  Matches  251;  Conservative  100;  Mismatches  149;  Indels   23;  Gaps    7;

Qy          5 TSHVTNAFSDSDSASVEEGDADADADVEALRRLSDNLAAAFRSPEDFAFLADARIAVPGG 64
              || |    :||    :          || ||: ||::  : | ||:|  | :||:: :
Db         17 TSFVATDNTDSSIVYLAAEQVLTGPDVSALQLLSNSFESVFDSPDD--FYSDAKLVL--- 71

Qy         65 GGGGGDLRVHRCVLSARSPFLRGVFARRAAAAAGGGGEDGSERLELRELLGGGGEEVEVG 124
                | ::  |||||||| | :   |  ||          : :|||:|:     :: |||
Db         72 -SDGREVSFHRCVLSARSSFFKSALA--AAKKEKDSNNTAAVKLELKEI----AKDYEVG 124

Qy        125 YEALRLVLDYLYSGRVGDLPKAACLCVDEDCAHVGCHPAVAFMAQVLFAASTFQVAELTN 184
              ::::  || |:|| ||   ||    | ||:| || | ||| || :||: |  |:: ||
Db        125 FDSVVTVLAYVYSSRVRPPPKGVSECADENCCHVACRPAVDFMLEVLYLAFIFKIPELIT 184

Qy        185 LFQRRLLDVLDKVEVDNLLLILSVANLCNKSCMKLLERCLDMVVRSNLDMITLEKSLPPD 244
              |:|| ||||:||| ::: |:|| :||:| |:||||:|| :::|:||:||::|||||| :
Db        185 LYQRHLLDVVDKVVIEDTLVILKLANICGKACMKLLDRCKEIIVKSNVDMVSLEKSLPEE 244

Qy        245 VIKQIIDARLSLGLISPENKGFPNKHVRRIHRALDSDDVELVRMLLTEGQTNLDDAFALH 304
                ::|:||| |  ||| |: |    ||| :|:|||||:|||::|| |  |||||| |||
Db        245 LVKEIIDRRKELGLEVPKVK----KHVSNVHKALDSDDIELVKLLLKEDHTNLDDACALH 300

Qy        305 YAVEHCDSKITTELLDLALADVNHRNPRGYTVLHIAARRREPKIIVSLLTKGARPADVTF 364
              :|| :|: |  |:|| | ||||||||||||||||:|| |:||::|:||| |||  :: |
Db        301 FAVAYCNVKTATDLLKLDLADVNHRNPRGYTVLHVAAMRKEPQLILSLLEKGASASEATL 360

Qy        365 DGRKAVQISKRLTKQGDYFGVTEEGKPSPKDRLCIEILEQAERRDPQLGEASVSLAMAGE 424
              :|| |: |:|: |   :   : |: | | | |||:|||| ::|:    :   | |:| :
Db        361 EGRTALMIAKQATMAVECNNIPEQCKHSLKGRLCVEILEQEDKREQIPRDVPPSFAVAAD 420

Qy        425 SLRGRLLYLENRVALARIMFPMEARVAMDIAQVDGTLEFNLGSGANPPPER----QRTTV 480
                |:  || |||||||: :|| ||: ||:||:: || || : |     |:|    :||:
Db        421 ELKMTLLDLENRVALAQRLFPTEAQAAMEIAEMKGTCEFIVTS---LEPDRLTGTKRTSP 477

Qy        481 DLNESPFIMKEEHLARMTALSKTVELGKRFFPRCSNVLDKIMD 523
              :  :|| : ||| :|: |||||||||||||||| |||:||:
Db        478 GVKIAPFRILEEHQSRLKALSKTVELGKRFFPRCSAVLDQIMN 520


RESULT 14
US-08-989-478-10
; Sequence 10, Application US/08989478
; Patent No. 5986082
;  GENERAL INFORMATION:
;    APPLICANT:  Uknes, Scott
;    APPLICANT:  Hunt, Michelle
;    APPLICANT:  Steiner, Henry-York
;    APPLICANT:  Ryals, John
;    TITLE OF INVENTION:  ALTERED FORMS OF THE NIM1 GENE CONFERRING
;    TITLE OF INVENTION:  DISEASE RESISTANCE IN PLANTS
;    NUMBER OF SEQUENCES:  32
;    CORRESPONDENCE ADDRESS:
;      ADDRESSEE:  No. 5986082artis Corporation
;      STREET:  3054 Cornwallis Road
;      CITY:  Research Triangle Park
;      STATE:  No. 5986082th Carolina
;      COUNTRY:  USA
;      ZIP:  27709
;    COMPUTER READABLE FORM:
;      MEDIUM TYPE:  Floppy disk
;      COMPUTER:  IBM PC compatible
;      OPERATING SYSTEM:  PC-DOS/MS-DOS
;      SOFTWARE:  PatentIn Release #1.0, Version #1.30
;    CURRENT APPLICATION DATA:
;      APPLICATION NUMBER:  US/08/989,478
;      FILING DATE:
;      CLASSIFICATION:
;    PRIOR APPLICATION DATA:
;      APPLICATION NUMBER:  US 60/033,177
;      FILING DATE:  13-DEC-1996
;    PRIOR APPLICATION DATA:
;      APPLICATION NUMBER:  US 60/034,379
;      FILING DATE:  27-DEC-1996
;    PRIOR APPLICATION DATA:
;      APPLICATION NUMBER:  US 60/034,382
;      FILING DATE:  27-DEC-1996
;    PRIOR APPLICATION DATA:
;      APPLICATION NUMBER:  US 60/034,730
;      FILING DATE:  10-JAN-1997
;    PRIOR APPLICATION DATA:
;      APPLICATION NUMBER:  US 60/035,021
;      FILING DATE:  10-JAN-1997
;    PRIOR APPLICATION DATA:
;      APPLICATION NUMBER:  US 60/035,022
;      FILING DATE:  10-JAN-1997
;    ATTORNEY/AGENT INFORMATION:
;      NAME:  Meigs, J. Timothy
;      REGISTRATION NUMBER:  38,241
;      REFERENCE/DOCKET NUMBER:  PF/5-21214/P1/CGC1911
;    TELECOMMUNICATION INFORMATION:
;      TELEPHONE:  (919) 541-8587
;      TELEFAX:  (919) 541-8689
```

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;  INFORMATION FOR SEQ ID NO:  10:
;    SEQUENCE CHARACTERISTICS:
;     LENGTH: 469 amino acids
;      TYPE:  amino acid
;      TOPOLOGY:  linear
;    MOLECULE TYPE:  protein
US-08-989-478-10

  Query Match             38.4%;  Score 1134;  DB 2;  Length 469;
  Best Local Similarity   51.4%;  Pred. No. 4.8e-107;
  Matches  233;  Conservative   89;  Mismatches  115;  Indels   16;  Gaps    5;

Qy        131 VLDYLYSGRVGDLPKAACLCVDEDCAHVGCHPAVAFMAQVLFAASTFQVAELTNLFQRRL 190
              || |:|| ||    ||     | ||:| || | ||| || :||: |  |:: ||  |:|| |
Db          7 VLAYVYSSRVRPPPKGVSECADENCCHVACRPAVDFMLEVLYLAFIFKIPELITLYQRHL 66

Qy        191 LDVLDKVEVDNLLLILSVANLCNKSCMKLLERCLDMVVRSNLDMITLEKSLPPDVIKQII 250
              |||:||| ::: |:|| :||:| |:|||||:|| :::|:|:||::|||||| :::|:||
Db         67 LDVVDKVVIEDTLVILKLANICGKACMKLLDRCKEIIVKSNVDMVSLEKSLPEELVKEII 126

Qy        251 DARLSLGLISPENKGFPNKHVRRIHRALDSDDVELVRMLLTEGQTNLDDAFALHYAVEHC 310
              | |  |||  |: |    |||  :|:||||||:|||::|| |  |||||| |||:|| :|
Db        127 DRRKELGLEVPKVK----KHVSNVHKALDSDDIELVKLLLKEDHTNLDDACALHFAVAYC 182

Qy        311 DSKITTELLDLALADVNHRNPRGYTVLHIAARRREPKIIVSLLTKGARPADVTFDGRKAV 370
              : |  |:|| | ||||||||||||||:|| |:|||:|:||| |||  :: | :|| |:
Db        183 NVKTATDLLKLDLADVNHRNPRGYTVLHVAAMRKEPQLILSLLEKGASASEATLEGRTAL 242

Qy        371 QISKRLTKQGDYFGVTEEGKPSPKDRLCIEILEQAERRDPQLGEASVSLAMAGESLRGRL 430
              |:|: |   :   : |: | | | |||:||||| ::|:    :   | |:| : |:  |
Db        243 MIAKQATMAVECNNIPEQCKHSLKGRLCVEILEQEDKREQIPRDVPPSFAVAADELKMTL 302

Qy        431 LYLENRVALARIMFPMEARVAMDIAQVDGTLEFNLGSGANPPPER----QRTTVDLNESP 486
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Db        303 LDLENRVALAQRLFPTEAQAAMEIAEMKGTCEFIVTS---LEPDRLTGTKRTSPGVKIAP 359

Qy        487 FIMKEEHLARMTALSKTVELGKRFFPRCSNVLDKIMD-DETDPVSLGRDTSAEKR----K 541
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Db        360 FRILEEHQSRLKALSKTVELGKRFFPRCSAVLDQIMNCEDLTQLACGEDDTAEKRLQKKQ 419

Qy        542 RFHDLQDVLQKAFHEDKEENDRSGLSSSSSSTS 574
              |: ::|: |:||| ||  |     |: |:|||
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RESULT 15
US-08-996-685-10
; Sequence 10, Application US/08996685
; Patent No. 6031153
;  GENERAL INFORMATION:
;    APPLICANT:  Ryals, John
;    APPLICANT:  Friedrich, Leslie
;    APPLICANT:  Uknes, Scott
;    APPLICANT:  Molina, Antonio
;    APPLICANT:  Ruess, Wilhelm
;    APPLICANT:  Knauf-Beiter, Gertrude
;    APPLICANT:  Kung, Ruth
;    APPLICANT:  Kessmann, Helmut
;    APPLICANT:  Oostendorp, Michael
;    TITLE OF INVENTION:  METHOD FOR PROTECTING PLANTS
;    NUMBER OF SEQUENCES:  32
;    CORRESPONDENCE ADDRESS:
;      ADDRESSEE:  No. 6031153artis Corporation
;      STREET:  3054 Cornwallis Road
;      CITY:  Research Triangle Park
;      STATE:  No. 6031153th Carolina
;      COUNTRY:  USA
;      ZIP:  27709
;    COMPUTER READABLE FORM:
;      MEDIUM TYPE:  Floppy disk
;      COMPUTER:  IBM PC compatible
;      OPERATING SYSTEM:  PC-DOS/MS-DOS
;      SOFTWARE:  PatentIn Release #1.0, Version #1.30
;    CURRENT APPLICATION DATA:
;      APPLICATION NUMBER:  US/08/996,685
;      FILING DATE:
;      CLASSIFICATION:
;    PRIOR APPLICATION DATA:
;      APPLICATION NUMBER:  US 08/761,543
;      FILING DATE:  6-DEC-1996
;    PRIOR APPLICATION DATA:
;      APPLICATION NUMBER:  US 60/034,378
;      FILING DATE:  27-DEC-1996
;    PRIOR APPLICATION DATA:
;      APPLICATION NUMBER:  US 60/034,379
;      FILING DATE:  27-DEC-1996
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;      FILING DATE:  27-DEC-1996
;    PRIOR APPLICATION DATA:
;      APPLICATION NUMBER:  US 60/034,730
;      FILING DATE:  10-JAN-1997
;    PRIOR APPLICATION DATA:
;      APPLICATION NUMBER:  US 60/035,021
;      FILING DATE:  10-JAN-1997
;    PRIOR APPLICATION DATA:
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;      FILING DATE:  10-JAN-1997
;    PRIOR APPLICATION DATA:
;      APPLICATION NUMBER:  US 60/035,024
;      FILING DATE:  10-JAN-1997
;    PRIOR APPLICATION DATA:
;      APPLICATION NUMBER:  US 08/875,015
;      FILING DATE:  16-JUL-1997
;    ATTORNEY/AGENT INFORMATION:
;      NAME:  Meigs, J. Timothy
;      REGISTRATION NUMBER:  38,241
;      REFERENCE/DOCKET NUMBER:  PF/5-21215/P1/CGC1912
;    TELECOMMUNICATION INFORMATION:
;      TELEPHONE:  (919) 541-8587
;      TELEFAX:  (919) 541-8689
;  INFORMATION FOR SEQ ID NO:  10:
;    SEQUENCE CHARACTERISTICS:
;     LENGTH: 469 amino acids
;      TYPE:  amino acid
;      TOPOLOGY:  linear
;    MOLECULE TYPE:  protein
US-08-996-685-10

  Query Match             38.4%;  Score 1134;  DB 3;  Length 469;
  Best Local Similarity   51.4%;  Pred. No. 4.8e-107;
  Matches  233;  Conservative   89;  Mismatches  115;  Indels   16;  Gaps    5;

Qy        131 VLDYLYSGRVGDLPKAACLCVDEDCAHVGCHPAVAFMAQVLFAASTFQVAELTNLFQRRL 190
              || |:|| ||    ||     | ||:| || | ||| || :||: |  |:: ||  |:|| |
Db          7 VLAYVYSSRVRPPPKGVSECADENCCHVACRPAVDFMLEVLYLAFIFKIPELITLYQRHL 66

Qy        191 LDVLDKVEVDNLLLILSVANLCNKSCMKLLERCLDMVVRSNLDMITLEKSLPPDVIKQII 250
              |||:||| ::: |:|| :||:| |:|||||:|| :::|:||:|||::|||||| :::|:||
Db         67 LDVVDKVVIEDTLVILKLANICGKACMKLLDRCKEIIVKSNVDMVSLEKSLPEELVKEII 126

Qy        251 DARLSLGLISPENKGFPNKHVRRIHRALDSDDVELVRMLLTEGQTNLDDAFALHYAVEHC 310
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Qy        431 LYLENRVALARIMFPMEARVAMDIAQVDGTLEFNLGSGANPPPER----QRTTVDLNESP 486
              | |||||||: :|| ||: ||:||:: || || : |     |:|    :||:  :  :|
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Qy        487 FIMKEEHLARMTALSKTVELGKRFFPRCSNVLDKIMD-DETDPVSLGRDTSAEKR----K 541
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Job time : 23 secs
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GenCore version 5.1.6

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Run on: December 7, 2003, 00:15:36 ; Search time 634 Seconds
(without alignments)
10694.231 Million cell updates/sec

Title: US-09-294-539-3
Perfect score: 2040
Sequence: 1 atggagccgccgaccagcca.....caaaaaaaaaaaaaaaaaa 2040

Scoring table: IDENTITY_NUC
Gapop 10.0 , Gapext 1.0

Searched: 2201672 seqs, 1661799599 residues

Total number of hits satisfying chosen parameters: 4403344

Minimum DB seq length: 0
Maximum DB seq length: 2000000000

Post-processing: Minimum Match 0%
Maximum Match 100%
Listing first 45 summaries

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Pred. No. is the number of results predicted by chance to have a score greater than or equal to the score of the result being printed, and is derived by analysis of the total score distribution.

SUMMARIES

Result No.	Score	% Query Match	Length	DB	ID	Description
1	2020.8	99.1	2194	12	US-09-848-841-9	Sequence 9, Appli
2	590.2	28.9	1731	12	US-10-328-675A-3	Sequence 3, Appli
3	563.4	27.6	1767	12	US-10-328-675A-1	Sequence 1, Appli
4	563.4	27.6	2172	8	US-08-908-884-13	Sequence 13, Appl
5	563.4	27.6	2172	9	US-09-908-323-13	Sequence 13, Appl
6	562	27.5	2296	12	US-10-328-675A-63	Sequence 63, Appl
7	422.2	20.7	2104	8	US-08-908-884-2	Sequence 2, Appli
8	422.2	20.7	2104	9	US-09-908-323-2	Sequence 2, Appli
9	422.2	20.7	2104	11	US-09-934-455-73	Sequence 73, Appl
10	422.2	20.7	2104	12	US-10-225-068-241	Sequence 241, App
11	381.8	18.7	1740	12	US-10-328-675A-5	Sequence 5, Appli
12	380.4	18.6	1803	12	US-10-328-675A-19	Sequence 19, Appl
13	380.4	18.6	1818	12	US-10-328-675A-71	Sequence 71, Appl
14	380.4	18.6	2083	11	US-09-934-455-433	Sequence 433, App
15	359.8	17.6	653	12	US-10-328-675A-45	Sequence 45, Appl
16	351.6	17.2	2717	12	US-09-848-841-15	Sequence 15, Appl
17	344.2	16.9	659	12	US-10-328-675A-29	Sequence 29, Appl
18	317.2	15.5	2069	12	US-09-848-841-11	Sequence 11, Appl
19	315.8	15.5	1428	14	US-10-318-780-1	Sequence 1, Appli
20	315.8	15.5	2368	14	US-10-318-780-2	Sequence 2, Appli
21	311.8	15.3	2154	13	US-10-047-593-1	Sequence 1, Appli
22	311.4	15.3	2673	12	US-10-328-675A-73	Sequence 73, Appl
23	309.8	15.2	1830	14	US-10-318-780-6	Sequence 6, Appli
24	309.8	15.2	2120	14	US-10-318-780-8	Sequence 8, Appli
25	306.2	15.0	1824	14	US-10-318-780-5	Sequence 5, Appli
26	306.2	15.0	2420	14	US-10-318-780-7	Sequence 7, Appli
27	277	13.6	498	12	US-10-328-675A-37	Sequence 37, Appl
28	276.6	13.6	498	12	US-10-328-675A-39	Sequence 39, Appl
29	265.4	13.0	2844	12	US-10-328-675A-65	Sequence 65, Appl
30	262	12.8	1761	12	US-10-328-675A-7	Sequence 7, Appli
31	258.4	12.7	5655	13	US-10-079-035-2	Sequence 2, Appli
32	258.4	12.7	7548	8	US-08-908-884-1	Sequence 1, Appli
33	258.4	12.7	7548	9	US-09-908-323-1	Sequence 1, Appli
c 34	258.4	12.7	9919	13	US-10-079-035-1	Sequence 1, Appli
35	243.4	11.9	2043	11	US-09-533-029-118	Sequence 118, App
36	235.6	11.5	1782	10	US-09-938-842A-368	Sequence 368, App
37	231.4	11.3	498	12	US-10-328-675A-41	Sequence 41, Appl
38	230.6	11.3	1385	14	US-10-318-780-16	Sequence 16, Appl
39	230.4	11.3	2235	14	US-10-318-780-20	Sequence 20, Appl
40	229	11.2	1725	12	US-10-328-675A-69	Sequence 69, Appl
41	227.4	11.1	1227	12	US-09-848-841-7	Sequence 7, Appli
42	208.6	10.2	1806	10	US-09-938-842A-2027	Sequence 2027, Ap
43	205.4	10.1	1804	12	US-10-328-675A-17	Sequence 17, Appl
44	204	10.0	2054	11	US-09-934-455-27	Sequence 27, Appl
45	204	10.0	2054	12	US-10-225-068-169	Sequence 169, App

ALIGNMENTS

RESULT 1
US-09-848-841-9
; Sequence 9, Application US/09848841
; Publication No. US20030172411A1
; GENERAL INFORMATION:
; APPLICANT: E. I. du Pont de Nemours and Company
; APPLICANT: Butler, Karla
; APPLICANT: Falco, Carl
; APPLICANT: Famodu, Omolayo O.
; APPLICANT: Fang, Yiwen
; APPLICANT: Han, Feng
; APPLICANT: Heppard, Elmer
; APPLICANT: Liu, Zhan-Bin
; APPLICANT: Miao, Gou-Hau
; APPLICANT: Odell, Joan
; APPLICANT: Rafalski, Antoni
; TITLE OF INVENTION: Disease Resistance Factors
; FILE REFERENCE: BB1252 US NA1
; CURRENT APPLICATION NUMBER: US/09/848,841
; CURRENT FILING DATE: 2001-05-04
; PRIOR APPLICATION NUMBER: 60/107,242
; PRIOR FILING DATE: 1998-11-05
; PRIOR APPLICATION NUMBER: US99/25,953
; PRIOR FILING DATE: 1999-10-04
; NUMBER OF SEQ ID NOS: 17
; SOFTWARE: Microsoft Office 97
; SEQ ID NO 9
; LENGTH: 2194
; TYPE: DNA
; ORGANISM: Oryza sativa
US-09-848-841-9

Query Match 99.1%; Score 2020.8; DB 12; Length 2194;
Best Local Similarity 99.4%; Pred. No. 0;
Matches 2028; Conservative 0; Mismatches 12; Indels 0; Gaps 0;

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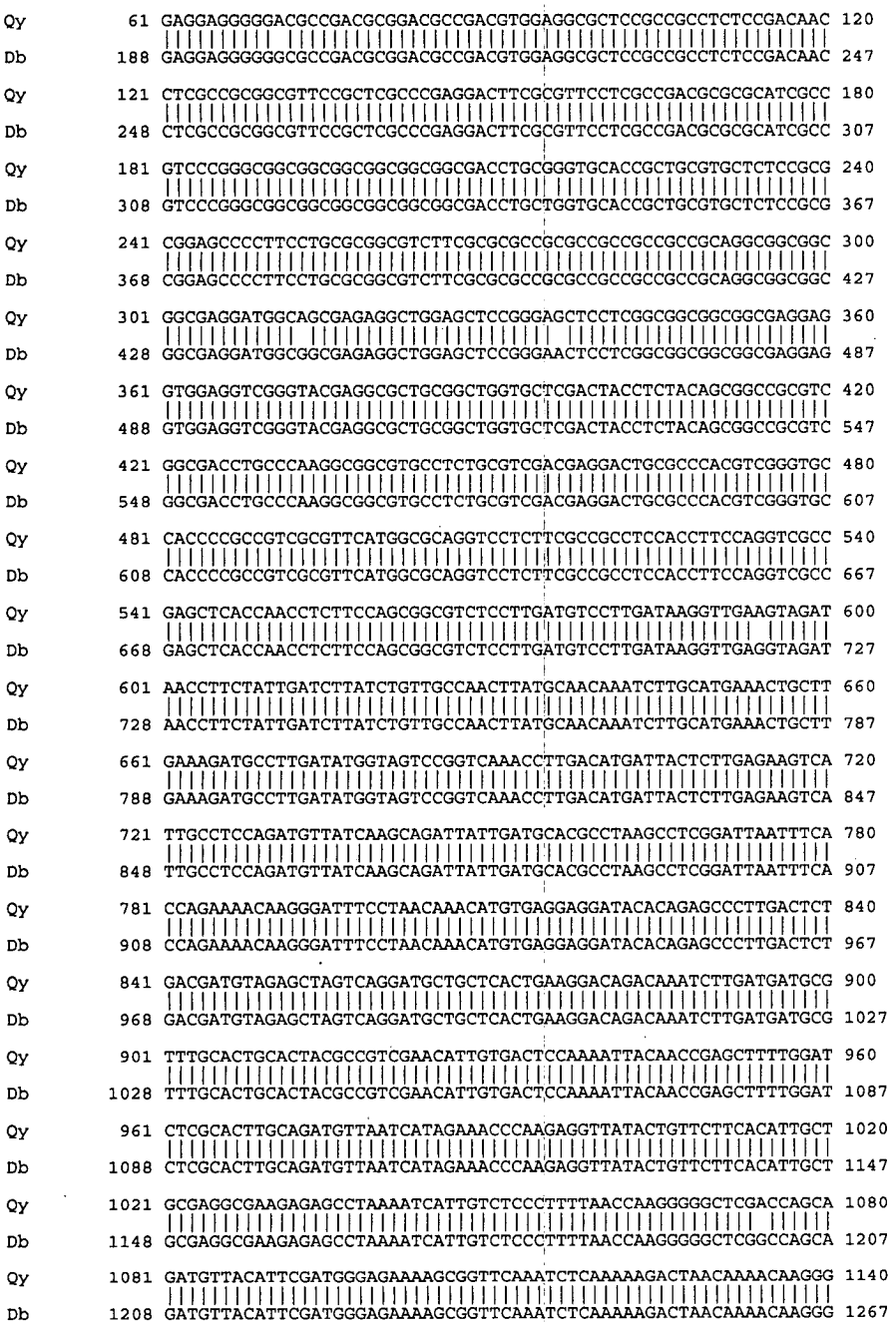

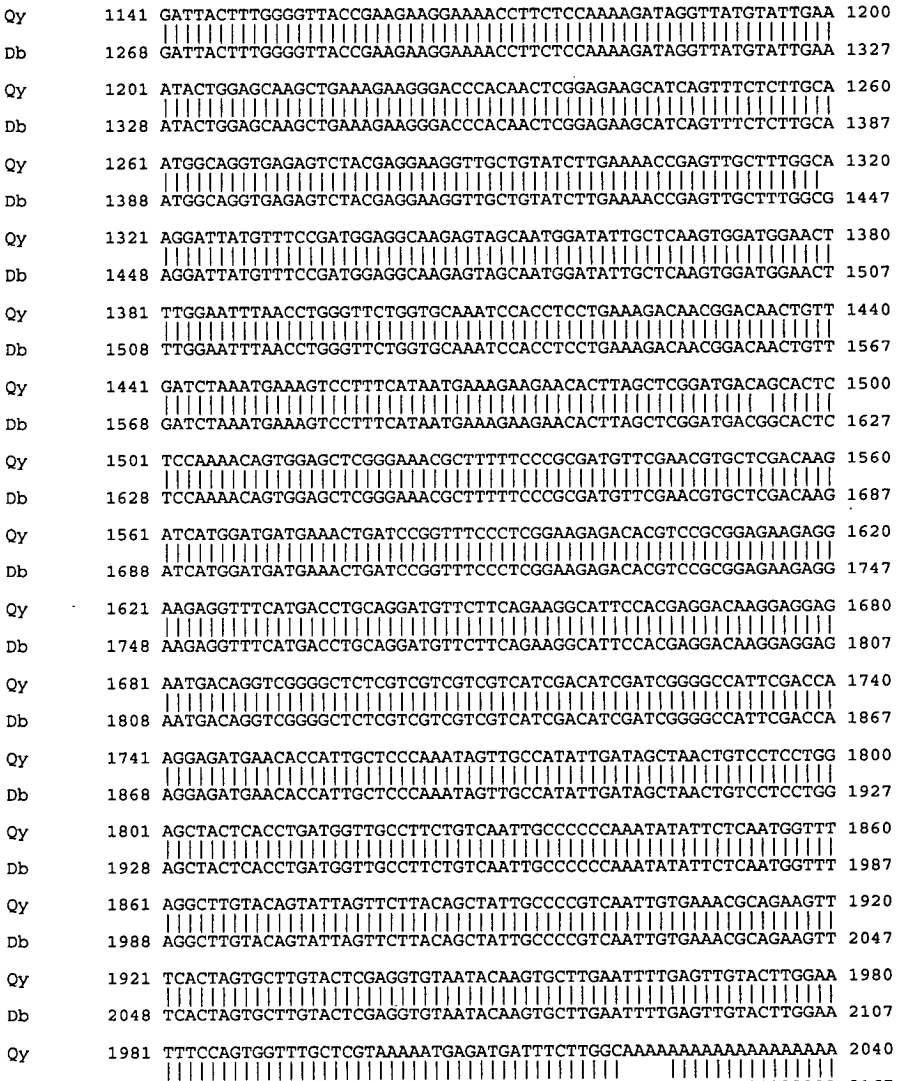

RESULT 2
US-10-328-675A-3
; Sequence 3, Application US/10328675A
; Publication No. US20030159171A1
; GENERAL INFORMATION:
; APPLICANT: Salmeron, John
; APPLICANT: Weislo, Laura
; APPLICANT: Willits, Michael
; TITLE OF INVENTION: NOVEL PLANT GENES AND USES THEREOF
; FILE REFERENCE: 30857USNPDIV1
; CURRENT APPLICATION NUMBER: US/10/328,675A
; CURRENT FILING DATE: 2002-12-23

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;  PRIOR APPLICATION NUMBER: 09/519,232
;  PRIOR FILING DATE: 2000-03-06
;  PRIOR APPLICATION NUMBER: 60/219,338
;  PRIOR FILING DATE: 1999-03-09
;  NUMBER OF SEQ ID NOS: 74
;  SOFTWARE: PatentIn Ver. 2.1
; SEQ ID NO 3
;   LENGTH: 1731
;   TYPE: DNA
;   ORGANISM: Lycopersicon esculentum
;   FEATURE:
;   NAME/KEY: CDS
;   LOCATION: (1)..(1728)
;   OTHER INFORMATION: Full length tomato cDNA sequence
US-10-328-675A-3

  Query Match             28.9%;  Score 590.2;  DB 12;  Length 1731;
  Best Local Similarity   65.2%;  Pred. No. 3.2e-126;
  Matches  906;  Conservative    0;  Mismatches  468;  Indels   15;  Gaps    2;

Qy        356 AGGAGGTGGAGGTCGGGTACGAGGCGCTGCGGCTGGTGCTCGACTACCTCTACAGCGGCC 415
              | |||   |||||  | |  || ||  ||       ||||||| |||  | || || ||
Db        308 AAGAGTATGAGGTGAGTTTTGATGCCGTGGTCAGTGTGCTCGCCTATTTGTATAGTGGAA 367

Qy        416 GCGTCGGCGACCTGCCCAAGGCGGCGTGCCTCTGCGTCGACGAGGACTGCGCCCACGTCG 475
              ||  |      | || |  | |||  | || || ||| | || |||    || || |
Db        368 AAGTTAGGCCTGCATCTAAAGATGTGTGTGTTTGTGTGGACAATGAGTGCTTGCATGTAG 427

Qy        476 GGTGCCACCCCGCCGTCGCGTTCATGGCGCAGGTCCTCTTCGCCGCCTCCACCTTCCAGG 535
              ||    || || || || |||||||  |||||  | | |||  |||  ||||| |||
Db        428 CTTGTAGGCCAGCTGTGGCCTTCATGGTTCAGGTTTTGTACGCATCCTTTACCTTTCAGA 487

Qy        536 TCGCCGAGCTCACCAACCTCTTCCAGCGGCGTCTCCTTGATGTCCTTGATAAGGTTGAAG 595
              || |  | |   | |||  || |||  | |  ||  | ||| | ||||| || | |||
Db        488 TCTCTCAATTGGTCGACAAGTTTCAGAGACACCTATTGGATATTCTTGACAAAGCTGTAG 547

Qy        596 TAGATAACCTTCTATTGATCTTATCTGTTGCCAACTTATGCAACAAATCTTGCATGAAAC 655
              |||| |  |  |  || | ||||| ||||| ||| | |||   ||| | ||    | |
Db        548 CAGATGATGTAATGATGGTTTTATCCGTTGCAAACATTTGCGGTAAAGCATGTGAAAGAT 607

Qy        656 TGCTTGAAAGATGCCTTGATATGGTAGTCCGGTCAAACCTTGACATGATTACTCTTGAGA 715
              | |||  ||||||| |||||||  | |||  ||| ||  |||| || || || ||||| |
Db        608 TACTTTCAAGATGCATTGATATTATTGTCAAGTCTAATGTTGATATCATAACCCTTGATA 667

Qy        716 AGTCATTGCCTCCAGATGTTATCAAGCAGATTATTGATGCACGCCTAAGCCTCGGATTAA 775
              |||| |||||||  ||  || | || || || | |||| ||||      || ||  |
Db        668 AGTCCTTGCCTCATGACATTGTAAAACAAATCACTGATTCACGTGCTGAACTTGGTCTGC 727

Qy        776 TTTCACCAGAAAACAAGGGATTTCCTAACAAACATGTGAGGAGGATACACAGAGCCCTTG 835
              || |||| ||| || |||||| | |||||||| | |||||||||  ||||  | |
Db        728 AAGGGCCTGAAAGCAATGGTTTTCCTGATAAACATGTTAAGAGGATACATAGAGCATTGG 787

Qy        836 ACTCTGACGATGTAGAGCTAGTCAGGATGCTGCTCACTGAAGGACAGACAAATCTTGATG 895
              ||||||| ||||| ||  || | |||||| |||| |  || || || || | ||||||||
Db        788 ACTCTGATGATGTTGAATTACTAAGGATGTTGCTTAAAGAGGGGCATACTACTCTTGATG 847

Qy        896 ATGCGTTTGCACTGCACTACGCCGTCGAACATTGTGACTCCAAAATTACAACCGAGCTTT 955
              |||| | ||| || ||||| || || | | |||| ||  | || | |||| | || ||||
Db        848 ATGCATATGCTCTCCACTATGCTGTAGCATATTGCGATGCAAAGACTACAGCAGAACTTT 907

Qy        956 TGGATCTCGCACTTGCAGATGTTAATCATAGAAACCCAAGAGGTTATACTGTTCTTCACA 1015
              | |||||  ||||||| ||||||||||||  ||| || |||||  | || || |||||
Db        908 TAGATCTTTCACTTGCTGATGTTAATCATCAAAATCCTAGAGGACACACGGTACTTCATG 967

Qy       1016 TTGCTGCGAGGCGAAGAGAGCCTAAAATCATTGTCTCCCTTTTAACCAAGGGGGCTCGAC 1075
              ||||||| | | | ||| |||||||| || || ||||||||||||||| || ||| |||
Db        968 TTGCTGCCATGAGGAAAGAACCTAAAATTATAGTGTCCCTTTTAACCAAAGGAGCTAGAC 1027

Qy       1076 CAGCAGATGTTACATTCGATGGGAGAAAAGCGGTTCAAATCTCAAAAAGACTAACAAAAC 1135
              |  | ||| | |||| |||||| | ||||||  |||||||  | || || || || | |
Db       1028 CTTCTGATCTGACATCCGATGGCAAAAAAGCACTTCAAATTGCTAAGAGGCTCACTAGGC 1087

Qy       1136 AAGGGGATTACTTTGGGGTTACCGAAGAAGGAAAACCTTCTCCAAAAGATAGGTTATGTA 1195
                |  ||||       |  ||| || ||||||||| || ||||||| ||| ||||||| |
Db       1088 TTGTAGATTTTACCAAGTCTACAGAGGAAGGAAAATCTGCTCCAAAGGATCGGTTATGCA 1147

Qy       1196 TTGAAATACTGGAGCAAGCTGAAAGAAGGGACCCACAACTCGGAGAAGCATCAGTTTCTC 1255
              |||| || |||||||||| |||||||| || |||| ||| |||||||| ||| | ||||
Db       1148 TTGAGATTCTGGAGCAAGCAGAAAGAAGAGATCCACTACTAGGAGAAGCTTCATTATCTC 1207

Qy       1256 TTGCAATGGCAGGTGAGAGTCTACGAGGAAGGTTGCTGTATCTTGAAAACCGAGTTGCTT 1315
              |||| |||||||| ||   | | ||   | | || | || ||||||||  |||||| |
Db       1208 TTGCTATGGCAGGCGATGATTTGCGTATGAAGCTGTTATACCTTGAAAATAGAGTTGGTC 1267

Qy       1316 TGGCAAGGATTATGTTTCCGATGGAGGCAAGAGTAGCAATGGATATTGCTCAAGTGGATG 1375
              |||| |   |  | ||||| ||||| |||| ||| |||||||| ||||| ||||| ||||
Db       1268 TGGCTAAACTCCTTTTTCCCATGGAAGCAAAAGTTGCAATGGACATTGCACAAGTTGATG 1327

Qy       1376 GAACTTTGGAATTTAACCTGGGTTCTGGTGCAAATCCACCTCCTGAAAGACAACGGACAA 1435
              | || |  |||||   ||||| |          ||         ||||   |||  ||||||
Db       1328 GCACGTCTGAATTACCCCTGGCTAGCATGAGGAAGAAGATAGCTGATGCACAGAGGACAA 1387

Qy       1436 CTGTTGATCTAAATGAAAGTCCTTTCATAATGAAAGAAGAACACTTAGCTCGGATGACAG 1495
              | || ||| | || ||   |||||||  |||||||| || |||||   |||| | |  |
Db       1388 CAGTGGATTTGAACGAGGCTCCTTTCAAGATGAAAGAGGAGCACTTGAATCGGCTTAGGG 1447

Qy       1496 CACTCTCCAAAACAGTGGAGCTCGGGAAACGCTTTTTCCCGCGATGTTCGAACGTGCTCG 1555
              | ||||| | ||| ||||| || || ||||| || || || || ||||| | || ||
Db       1448 CTCTCTCTAGAACTGTGGAACTTGGAAAACGGTTCTTTCCACGTTGTTCAGAAGTTCTAA 1507

Qy       1556 ACAAGATCATGGATGATGA------AACTGATCCGGTTTCCCTCGGAAGAGACACGTCCG 1609
              | |||||||||||| |||        ||||     | || | | || |  || ||    |
Db       1508 ATAAGATCATGGATGCTGATGACTTGTCTGAGATAGCTTACATGGGGAATGATACAGTAG 1567

Qy       1610 CGGA---------GAAGAGGAAGAGGTTTCATGACCTGCAGGATGTTCTTCAGAAGGCAT 1660
                ||         ||||| | | ||||     || || || ||  || |    || ||||
Db       1568 AAGAGCGTCAACTGAAGAAGCAAAGGTACATGGAACTTCAAGAAATTTTGTCTAAAGCAT 1627

Qy       1661 TCCACGAGGACAAGGAGGAGAATGACAGGTCGGGGCTCTCGTCGTCGTCGTCATCGACAT 1720
              ||   ||||| || || ||   || | | |      | || || || || |  || || ||||
Db       1628 TCACGGAGGATAAAGAAGAATTTGCTAAGACTAACATGTCCTCATCTTGTTCCTCTACAT 1687

Qy       1721 CGATCGGGG 1729
              | ||  || |
Db       1688 CTAAGGGAG 1696


RESULT 3
US-10-328-675A-1
; Sequence 1, Application US/10328675A
; Publication No. US20030159171A1
; GENERAL INFORMATION:
;  APPLICANT: Salmeron, John
;  APPLICANT:  Weislo, Laura
;  APPLICANT:  Willits, Michael
;  TITLE OF INVENTION: NOVEL PLANT GENES AND USES THEREOF
;  FILE REFERENCE: 30857USNPDIV1
;  CURRENT APPLICATION NUMBER: US/10/328,675A
;  CURRENT FILING DATE:  2002-12-23
;  PRIOR APPLICATION NUMBER: 09/519,232
;  PRIOR FILING DATE: 2000-03-06
;  PRIOR APPLICATION NUMBER: 60/219,338
;  PRIOR FILING DATE: 1999-03-09
;  NUMBER OF SEQ ID NOS: 74
;  SOFTWARE: PatentIn Ver. 2.1
; SEQ ID NO 1
;   LENGTH: 1767
;   TYPE: DNA
;   ORGANISM: Nicotiana tabacum
;   FEATURE:
;   NAME/KEY: CDS
;   LOCATION: (1)..(1764)
;   OTHER INFORMATION: Full length tobacco cDNA sequence
US-10-328-675A-1

  Query Match             27.6%;  Score 563.4;  DB 12;  Length 1767;
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Best Local Similarity 64.3%; Pred. No. 5e-120;
Matches 884; Conservative 0; Mismatches 476; Indels 15; Gaps 2;

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Qy        356 AGGAGGTGGAGGTCGGGTACGAGGCGCTGCGGCTGGTGCTCGACTACCTCTACAGCGGCC 415
Db        341 AAGAGCATGAGGTGAGCTATGATGCTGTAATGAGTGTATTGGCTTATTTGTATAGTGGTA 400

Qy        416 GCGTCGGCGACCTGCCCAAGGCGGCGTGCCTCTGCGTCGACGAGGACTGCGCCCACGTCG 475
Db        401 AAGTTAGGCCTTCACCTAAAGATGTGTGTGTTTGTGTGGACAATGACTGCTCTCATGTGG 460

Qy        476 GGTGCCACCCCGCCGTCGCGTTCATGGCGCAGGTCCTCTTCGCCGCCTCCACCTTCCAGG 535
Db        461 CTTGTAGGCCAGCTGTGGCATTCCTGGTTGAGGTTTTGTACACATCATTTACCTTTCAGA 520

Qy        536 TCGCCGAGCTCACCAACCTCTTCCAGCGGCGTCTCCTTGATGTCCTTGATAAGGTTGAAG 595
Db        521 TCTCTGAATTGGTTGACAAGTTTCAGAGACACCTACTGGATATTCTTGACAAAACTGCAG 580

Qy        596 TAGATAACCTTCTATTGATCTTATCTGTTGCCAACTTATGCAACAAATCTTGCATGAAAC 655
Db        581 CAGACGATGTAATGATGGTTTTATCTGTTGCAAACATTTGTGGTAAAGCATGCGAGAGAT 640

Qy        656 TGCTTGAAAGATGCCTTGATATGGTAGTCCGGTCAAACCTTGACATGATTACTCTTGAGA 715
Db        641 TGCTTTCAAGCTGCATTGAGATTATTGTCAAGTCTAATGTTGATATCATAACCCTTGATA 700

Qy        716 AGTCATTGCCTCCAGATGTTATCAAGCAGATTATTGATGCACGCCTAAGCCTCGGATTAA 775
Db        701 AAGCCTTGCCTCATGACATTGTAAAACAAATTACTGATTCACGAGCGGAACTTGGTCTAC 760

Qy        776 TTTCACCAGAAAACAAGGGATTTCCTAACAAACATGTGAGGAGGATACACAGAGCCCTTG 835
Db        761 AAGGGCCTGAAAGCAACGGTTTTCCTGATAAACATGTTAAGAGGATACATAGGGCATTGG 820

Qy        836 ACTCTGACGATGTAGAGCTAGTCAGGATGCTGCTCACTGAAGGACAGACAAATCTTGATG 895
Db        821 ATTCTGATGATGTTGAATTACTACAAATGTTGCTAAGAGAGGGGCATACTACCCTAGATG 880

Qy        896 ATGCGTTTGCACTGCACTACGCCGTCGAACATTGTGACTCCAAAATTACAACCGAGCTTT 955
Db        881 ATGCATATGCTCTCCATTATGCTGTAGCGTATTGCGATGCAAAGACTACAGCAGAACTTC 940

Qy        956 TGGATCTCGCACTTGCAGATGTTAATCATAGAAACCCAAGAGGTTATACTGTTCTTCACA 1015
Db        941 TAGATCTTGCACTTGCTGATATTAATCATCAAAATTCAAGGGGATACACGGTGCTGCATG 1000

Qy       1016 TTGCTGCGAGGCGAAGAGAGCCTAAAATCATTGTCTCCCTTTTAACCAAGGGGGCTCGAC 1075
Db       1001 TTGCAGCCATGAGGAAAGAGCCTAAAATTGTAGTGTCCCTTTTAACCAAAGGAGCTAGAC 1060

Qy       1076 CAGCAGATGTTACATTCGATGGGAGAAAAGCGGTTCAAATCTCAAAAAGACTAACAAAAC 1135
Db       1061 CTTCTGATCTGACATCCGATGGAAGAAAAGCACTTCAAATCGCCAAGAGGCTCACTAGGC 1120

Qy       1136 AAGGGGATTACTTTGGGGTTACCGAAGAAGGAAAACCTTCTCCAAAAGATAGGTTATGTA 1195
Db       1121 TTGTGGATTTCAGTAAGTCTCCGGAGGAAGGAAAATCTGCTTCGAATGATCGGTTATGCA 1180

Qy       1196 TTGAAATACTGGAGCAAGCTGAAAGAAGGGACCCACAACTCGGAGAAGCATCAGTTTCTC 1255
Db       1181 TTGAGATTCTGGAGCAAGCAGAAAGAAGAGACCCTCTGCTAGGAGAAGCTTCTGTATCTC 1240

Qy       1256 TTGCAATGGCAGGTGAGAGTCTACGAGGAAGGTTGCTGTATCTTGAAAACCGAGTTGCTT 1315
Db       1241 TTGCTATGGCAGGCGATGATTTGCGTATGAAGCTGTTATACCTTGAAAATAGAGTTGGCC 1300

Qy       1316 TGGCAAGGATTATGTTTCCGATGGAGGCAAGAGTAGCAATGGATATTGCTCAAGTGGATG 1375
Db       1301 TGGCTAAACTCCTTTTTCCAATGGAAGCTAAAGTTGCAATGGACATTGCTCAAGTTGATG 1360

Qy       1376 GAACTTTGGAATTTAACCTGGGTTCTGGTGCAAATCCACCTCCTGAAAGACAACGGACAA 1435
Db       1361 GCACTTCTGAGTTCCCACTGGCTAGCATCGGCAAAAAGATGGCTAATGCACAGAGGACAA 1420

Qy       1436 CTGTTGATCTAAATGAAAGTCCTTTCATAATGAAAGAAGAACACTTAGCTCGGATGACAG 1495
Db       1421 CAGTAGATTTGAACGAGGCTCCTTTCAAGATAAAAGAGGAGCACTTGAATCGGCTTAGAG 1480

Qy       1496 CACTCTCCAAAACAGTGGAGCTCGGGAAACGCTTTTTCCCGCGATGTTCGAACGTGCTCG 1555
Db       1481 CACTCTCTAGAACTGTAGAACTTGGAAAACGCTTCTTTCCACGTTGTTCAGAAGTTCTAA 1540

Qy       1556 ACAAGATCATGGATGATGA------AACTGATCCGGTTTCCCTCGGAAGAGACACGTCCG 1609
Db       1541 ATAAGATCATGGATGCTGATGACTTGTCTGAGATAGCTTACATGGGGAATGATACGGCAG 1600

Qy       1610 CGGA---------GAAGAGGAAGAGGTTTCATGACCTGCAGGATGTTCTTCAGAAGGCAT 1660
Db       1601 AAGAGCGTCAACTGAAGAAGCAAAGGTACATGGAACTTCAAGAAATTCTGACTAAAGCAT 1660

Qy       1661 TCCACGAGGACAAGGAGGAGAATGACAGGTCGGGGCTCTCGTCGTCGTCGTCATC 1715
Db       1661 TCACTGAGGATAAAGAAGAATATGATAAGACTAACAACATCTCCTCATCTTGTTC 1715
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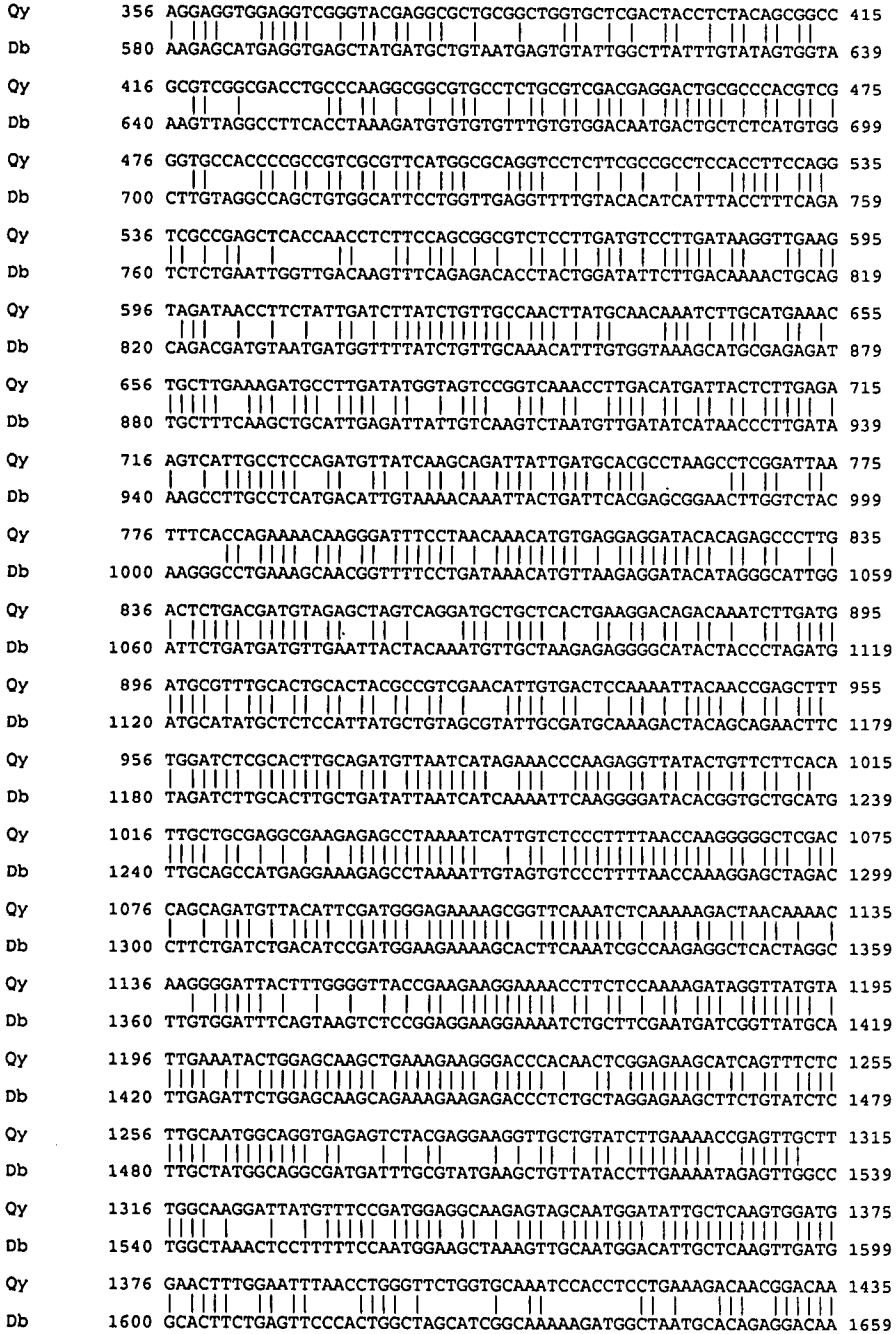
RESULT 4
US-08-908-884-13
; Sequence 13, Application US/08908884
; Publication No. US20020138872A1
; GENERAL INFORMATION:
; APPLICANT: Dong et al.
; TITLE OF INVENTION: ACQUIRED RESISTANCE GENES AND USES THEREOF
; NUMBER OF SEQUENCES: 28
; CORRESPONDENCE ADDRESS:
; ADDRESSEE: Clark & Elbing LLP
; STREET: 176 Federal Street
; CITY: Boston
; STATE: MA
; COUNTRY: USA
; ZIP: 02110
; COMPUTER READABLE FORM:
; MEDIUM TYPE: Diskette
; COMPUTER: IBM Compatible
; OPERATING SYSTEM: DOS
; SOFTWARE: FastSEQ for Windows Version 2.0
; CURRENT APPLICATION DATA:
; APPLICATION NUMBER: US/08/908,884
; FILING DATE:
; CLASSIFICATION: 800
; PRIOR APPLICATION DATA:
; APPLICATION NUMBER: 60/023,851
; FILING DATE: August 9, 1996
; APPLICATION NUMBER: 60/035,166
; FILING DATE: January 10, 1997
; APPLICATION NUMBER: 60/046,769
; FILING DATE: May 16, 1997
; ATTORNEY/AGENT INFORMATION:
; NAME: Elbing, Karen L
; REGISTRATION NUMBER: 35,238
; REFERENCE/DOCKET NUMBER: 00786/339004
; TELECOMMUNICATION INFORMATION:
; TELEPHONE: 617-428-0200
; TELEFAX: 617-428-7045
; INFORMATION FOR SEQ ID NO: 13:
; SEQUENCE CHARACTERISTICS:
; LENGTH: 2172 base pairs
; TYPE: nucleic acid
; STRANDEDNESS: double
; TOPOLOGY: linear
; MOLECULE TYPE: cDNA
US-08-908-884-13

Query Match 27.6%; Score 563.4; DB 8; Length 2172;
Best Local Similarity 64.3%; Pred. No. 5.4e-120;
Matches 884; Conservative 0; Mismatches 476; Indels 15; Gaps 2;



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Qy       356 AGGAGGTGGAGGTCGGGTACGAGGCGCTGCGGCTGGTGCTCGACTACCTCTACAGCGGCC 415
Db       580 AAGAGCATGAGGTGAGCTATGATGCTGTAATGAGTGTATTGGCTTATTTGTATAGTGGTA 639

Qy       416 GCGTCGGCGACCTGCCCAAGGCGGCGTGCCTCTGCGTCGACGAGGACTGCGCCCACGTCG 475
Db       640 AAGTTAGGCCTTCACCTAAAGATGTGTGTGTTTGTGTGGACAATGACTGCTCTCATGTGG 699

Qy       476 GGTGCCACCCCGCCGTCGCGTTCATGGCGCAGGTCCTCTTCGCCGCCTCCACCTTCCAGG 535
Db       700 CTTGTAGGCCAGCTGTGGCATTCCTGGTTGAGGTTTTGTACACATCATTTACCTTTCAGA 759

Qy       536 TCGCCGAGCTCACCAACCTCTTCCAGCGGCGTCTCCTTGATGTCCTTGATAAGGTTGAAG 595
Db       760 TCTCTGAATTGGTTGACAAGTTTCAGAGACACCTACTGGATATTCTTGACAAAACTGCAG 819

Qy       596 TAGATAACCTTCTATTGATCTTATCTGTTGCCAACTTATGCAACAAATCTTGCATGAAAC 655
Db       820 CAGACGATGTAATGATGGTTTTATCTGTTGCAAACATTTGTGGTAAAGCATGCGAGAGAT 879

Qy       656 TGCTTGAAAGATGCCTTGATATGGTAGTCCGGTCAAACCTTGACATGATTACTCTTGAGA 715
Db       880 TGCTTTCAAGCTGCATTGAGATTATTGTCAAGTCTAATGTTGATATCATAACCCTTGATA 939

Qy       716 AGTCATTGCCTCCAGATGTTATCAAGCAGATTATTGATGCACGCCTAAGCCTCGGATTAA 775
Db       940 AAGCCTTGCCTCATGACATTGTAAAACAAATTACTGATTCACGAGCGGAACTTGGTCTAC 999

Qy       776 TTTCACCAGAAAACAAGGGATTTCCTAACAAACATGTGAGGAGGATACACAGAGCCCTTG 835
Db      1000 AAGGGCCTGAAAGCAACGGTTTTCCTGATAAACATGTTAAGAGGATACATAGGGCATTGG 1059

Qy       836 ACTCTGACGATGTAGAGCTAGTCAGGATGCTGCTCACTGAAGGACAGACAAATCTTGATG 895
Db      1060 ATTCTGATGATGTTGAATTACTACAAATGTTGCTAAGAGAGGGGCATACTACCCTAGATG 1119

Qy       896 ATGCGTTTGCACTGCACTACGCCGTCGAACATTGTGACTCCAAAATTACAACCGAGCTTT 955
Db      1120 ATGCATATGCTCTCCATTATGCTGTAGCGTATTGCGATGCAAAGACTACAGCAGAACTTC 1179

Qy       956 TGGATCTCGCACTTGCAGATGTTAATCATAGAAACCCAAGAGGTTATACTGTTCTTCACA 1015
Db      1180 TAGATCTTGCACTTGCTGATATTAATCATCAAAATTCAAGGGGATACACGGTGCTGCATG 1239

Qy      1016 TTGCTGCGAGGCGAAGAGAGCCTAAAATCATTGTCTCCCTTTTAACCAAGGGGGCTCGAC 1075
Db      1240 TTGCAGCCATGAGGAAAGAGCCTAAAATTGTAGTGTCCCTTTTAACCAAAGGAGCTAGAC 1299

Qy      1076 CAGCAGATGTTACATTCGATGGGAGAAAAGCGGTTCAAATCTCAAAAAGACTAACAAAAC 1135
Db      1300 CTTCTGATCTGACATCCGATGGAAGAAAAGCACTTCAAATCGCCAAGAGGCTCACTAGGC 1359

Qy      1136 AAGGGGATTACTTTGGGGTTACCGAAGAAGGAAAACCTTCTCCAAAAGATAGGTTATGTA 1195
Db      1360 TTGTGGATTTCAGTAAGTCTCCGGAGGAAGGAAAATCTGCTTCGAATGATCGGTTATGCA 1419

Qy      1196 TTGAAATACTGGAGCAAGCTGAAAGAAGGGACCCACAACTCGGAGAAGCATCAGTTTCTC 1255
Db      1420 TTGAGATTCTGGAGCAAGCAGAAAGAAGAGACCCTCTGCTAGGAGAAGCTTCTGTATCTC 1479

Qy      1256 TTGCAATGGCAGGTGAGAGTCTACGAGGAAGGTTGCTGTATCTTGAAAACCGAGTTGCTT 1315
Db      1480 TTGCTATGGCAGGCGATGATTTGCGTATGAAGCTGTTATACCTTGAAAATAGAGTTGGCC 1539

Qy      1316 TGGCAAGGATTATGTTTCCGATGGAGGCAAGAGTAGCAATGGATATTGCTCAAGTGGATG 1375
Db      1540 TGGCTAAACTCCTTTTTCCAATGGAAGCTAAAGTTGCAATGGACATTGCTCAAGTTGATG 1599

Qy      1376 GAACTTTGGAATTTAACCTGGGTTCTGGTGCAAATCCACCTCCTGAAAGACAACGGACAA 1435
Db      1600 GCACTTCTGAGTTCCCACTGGCTAGCATCGGCAAAAAGATGGCTAATGCACAGAGGACAA 1659

Qy      1436 CTGTTGATCTAAATGAAAGTCCTTTCATAATGAAAGAAGAACACTTAGCTCGGATGACAG 1495
Db      1660 CAGTAGATTTGAACGAGGCTCCTTTCAAGATAAAAGAGGAGCACTTGAATCGGCTTAGAG 1719

Qy      1496 CACTCTCCAAAACAGTGGAGCTCGGGAAACGCTTTTTCCCGCGATGTTCGAACGTGCTCG 1555
Db      1720 CACTCTCTAGAACTGTAGAACTTGGAAAACGCTTCTTTCCACGTTGTTCAGAAGTTCTAA 1779

Qy      1556 ACAAGATCATGGATGATGA------AACTGATCCGGTTTCCCTCGGAAGAGACACGTCCG 1609
Db      1780 ATAAGATCATGGATGCTGATGACTTGTCTGAGATAGCTTACATGGGGAATGATACGGCAG 1839

Qy      1610 CGGA---------GAAGAGGAAGAGGTTTCATGACCTGCAGGATGTTCTTCAGAAGGCAT 1660
Db      1840 AAGAGCGTCAACTGAAGAAGCAAAGGTACATGGAACTTCAAGAAATTCTGACTAAAGCAT 1899

Qy      1661 TCCACGAGGACAAGGAGGAGAATGACAGGTCGGGGCTCTCGTCGTCGTCGTCATC 1715
Db      1900 TCACTGAGGATAAAGAAGAATATGATAAGACTAACAACATCTCCTCATCTTGTTC 1954
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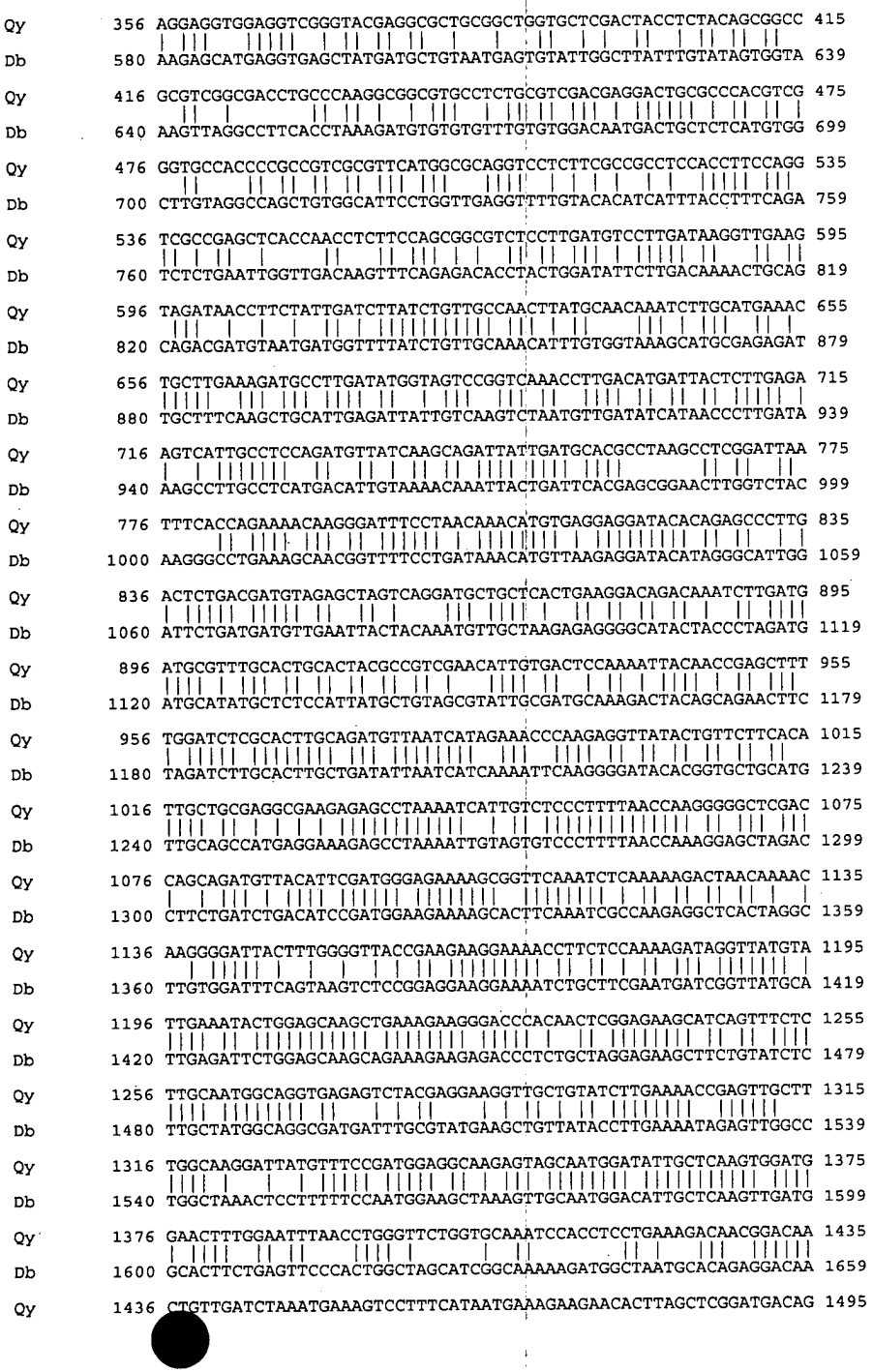
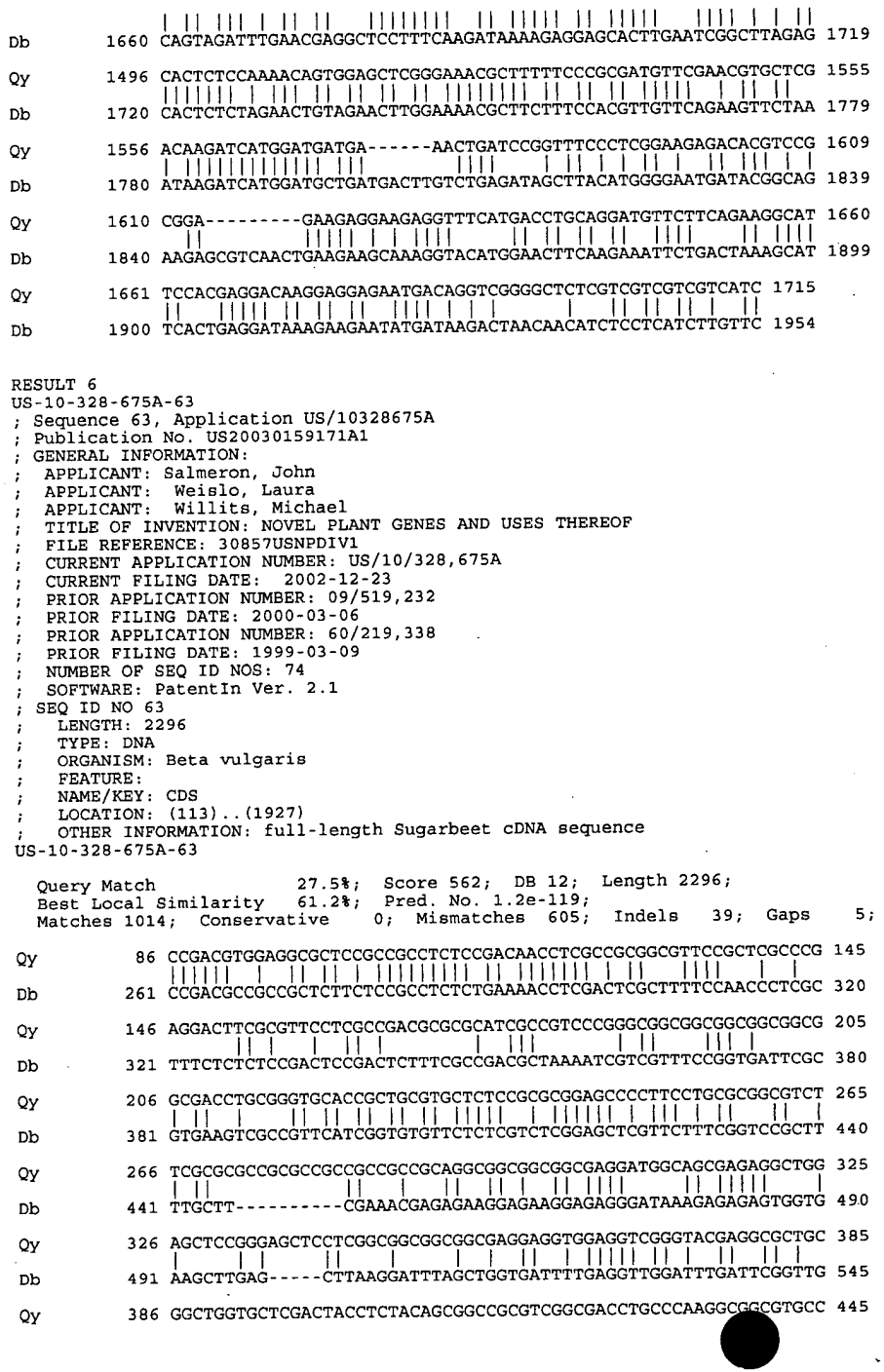
RESULT 5
US-09-908-323-13
; Sequence 13, Application US/09908323
; Patent No. US20020073447A1
; GENERAL INFORMATION:
; APPLICANT: Dong et al.
; TITLE OF INVENTION: ACQUIRED RESISTANCE GENES AND USES THEREOF
; NUMBER OF SEQUENCES: 28
; CORRESPONDENCE ADDRESS:
; ADDRESSEE: Clark & Elbing LLP
; STREET: 176 Federal Street
; CITY: Boston
; STATE: MA
; COUNTRY: USA
; ZIP: 02110
; COMPUTER READABLE FORM:
; MEDIUM TYPE: Diskette
; COMPUTER: IBM Compatible
; OPERATING SYSTEM: DOS
; SOFTWARE: FastSEQ for Windows Version 2.0
; CURRENT APPLICATION DATA:
; APPLICATION NUMBER: US/09/908,323
; FILING DATE: 17-Jul-2001
; CLASSIFICATION: <Unknown>
; PRIOR APPLICATION DATA:
; APPLICATION NUMBER: 08/908,884
; FILING DATE: <Unknown>
; APPLICATION NUMBER: 60/035,166
; FILING DATE: January 10, 1997
; APPLICATION NUMBER: 60/046,769
; FILING DATE: May 16, 1997
; ATTORNEY/AGENT INFORMATION:
; NAME: Elbing, Karen L
; REGISTRATION NUMBER: 35,238
; REFERENCE/DOCKET NUMBER: 00786/339004
; TELECOMMUNICATION INFORMATION:
; TELEPHONE: 617-428-0200
; TELEFAX: 617-428-7045
; INFORMATION FOR SEQ ID NO: 13:
; SEQUENCE CHARACTERISTICS:
; LENGTH: 2172 base pairs
; TYPE: nucleic acid
; STRANDEDNESS: double
; TOPOLOGY: linear
; MOLECULE TYPE: cDNA
; SEQUENCE DESCRIPTION: SEQ ID NO: 13:
US-09-908-323-13

Query Match 27.6%; Score 563.4; DB 9; Length 2172;
Best Local Similarity 64.3%; Pred. No. 5.4e-120;
Matches 884; Conservative 0; Mismatches 476; Indels 15; Gaps 2;





RESULT 6
US-10-328-675A-63
; Sequence 63, Application US/10328675A
; Publication No. US20030159171A1
; GENERAL INFORMATION:
; APPLICANT: Salmeron, John
; APPLICANT: Weislo, Laura
; APPLICANT: Willits, Michael
; TITLE OF INVENTION: NOVEL PLANT GENES AND USES THEREOF
; FILE REFERENCE: 30857USNPDIV1
; CURRENT APPLICATION NUMBER: US/10/328,675A
; CURRENT FILING DATE: 2002-12-23
; PRIOR APPLICATION NUMBER: 09/519,232
; PRIOR FILING DATE: 2000-03-06
; PRIOR APPLICATION NUMBER: 60/219,338
; PRIOR FILING DATE: 1999-03-09
; NUMBER OF SEQ ID NOS: 74
; SOFTWARE: PatentIn Ver. 2.1
; SEQ ID NO 63
; LENGTH: 2296
; TYPE: DNA
; ORGANISM: Beta vulgaris
; FEATURE:
; NAME/KEY: CDS
; LOCATION: (113)..(1927)
; OTHER INFORMATION: full-length Sugarbeet cDNA sequence
US-10-328-675A-63

Query Match 27.5%; Score 562; DB 12; Length 2296;
Best Local Similarity 61.2%; Pred. No. 1.2e-119;
Matches 1014; Conservative 0; Mismatches 605; Indels 39; Gaps 5;

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Db        546 TTGCGGTTTTAGGTTATTTGTATAGTGGCAAAGTTAGGAATTTGCCTAGAGGAATTTGTG 605

Qy        446 TCTGCGTCGACGAGGACTGCGCCCACGTCGGGTGCCACCCCGCCGTCGCGTTCATGGCGC 505

Db        606 TTTGTGTTGATGAGGATTGCTCTCATGAAGCTTGTCGTCCTGCTGTTGATTTTGTTGTTG 665

Qy        506 AGGTCCTCTTCGCCGCCTCCACCTTCCAGGTCGCCGAGCTCACCAACCTCTTCCAGCGGC 565

Db        666 AGGTTCTCTATTTGTCTCACAAATTCGAGATTGTCGAATTGGTTTCGCTTTATCAGAGGC 725

Qy        566 GTCTCCTTGATGTCCTTGATAAGGTTGAAGTAGATAACCTTCTATTGATCTTATCTGTTG 625

Db        726 ACCTACTGGATATTCTTGACAAGATTGCACCAGATGACGTTCTAGTAGTGTTATCTGTCG 785

Qy        626 CCAACTTATGCAACAAATCTTGCATGAAACTGCTTGAAAGATGCCTTGATATGGTAGTCC 685

Db        786 CTGAGATGTGTGGAAATGCGTGTGACGGATTGCTGGCAAGGTGTATTGACAAGATTGTGA 845

Qy        686 GGTCAAACCTTGACATGATTACTCTTGAGAAGTCATTGCCTCCAGATGTTATCAAGCAGA 745

Db        846 GGTCCGATATTGACGTAACCACCATTGATAAATCCTTGCCGCAGAATGTTGTGAAACAGA 905

Qy        746 TTATTGATGCACGCCTAAGCCTCGGATTAATTTCACCAGAAAACAAGGGATTTCCTAACA 805

Db        906 TAATCGACACGCGAAAGGAACTTGGGTTTACTGAACCTGGGCGTGTTGAGTTTCCTGATA 965

Qy        806 AACATGTGAGGAGGATACACAGAGCCCTTGACTCTGACGATGTAGAGCTAGTCAGGATGC 865

Db        966 AGCATGTGAAGAGAATACACAGAGCTTTGGAATCCGATGATGTAGAGTTAGTCAGAATGC 1025

Qy        866 TGCTCACTGAAGGACAGACAAATCTTGATGATGCGTTTGCACTGCACTACGCCGTCGAAC 925

Db       1026 TTTTAAAAGAGCGCCATACAACTCTAGATGATGCATATGCCCTTCACTATGCTGTGGCAC 1085

Qy        926 ATTGTGACTCCAAAATTACAACCGAGCTTTTGGATCTCGCACTTGCAGATGTTAATCATA 985

Db       1086 ATTGTGATGCCAAGACCACCACGGAGCTTCTTGAGCTTGGGCTTGCAGATGTTAATCTTA 1145

Qy        986 GAAACCCAAGAGGTTATACTGTTCTTCACATTGCTGCGAGGCGAAGAGAGCCTAAAATCA 1045

Db       1146 GAAATCTAAGGGGTCACACTGTGCTACATGTGGCAGCCATGAGAAAAGAGCCTAAGATAA 1205

Qy       1046 TTGTCTCCCTTTTAACCAAGGGGGCTCGACCAGCAGATGTTACATTCGATGGGAGAAAAG 1105

Db       1206 TTGTATCCTTGTTAACCAAGGGAGCCCATCCGTCTGATATAACATCAGATGATAAAAAAG 1265

Qy       1106 CGGTTCAAATCTCAAAAAGACTAACAAAACAAGGGGATTACTTTGGGGTTACCGAAGAAG 1165

Db       1266 CACTGCAGATAGCAAAGAGACTAACAAAAGCTGTGGACTTCTATAAAACTACAGAACAAG 1325

Qy       1166 GAAAACCTTCTCCAAAAGATAGGTTATGTATTGAAATACTGGAGCAAGCTGAAAGAAGGG 1225

Db       1326 GAAAAGATGCACCAAAGGATCGGTTGTGCATTGAAATACTGGAGCAAGCTGAAAGAAGAG 1385

Qy       1226 ACCCACAACTCGGAGAAGCATCAGTTTCTCTTGCAATGGCAGGTGAGAGTCTACGAGGAA 1285

Db       1386 AACCATTGCTAGGAGAAGGTTCTGTTTCTCTTGCAAAGGCAGGAGATGATCTGCGTATGA 1445

Qy       1286 GGTTGCTGTATCTTGAAAACCGAGTTGCTTTGGCAAGGATTATGTTTCCGATGGAGGCAA 1345

Db       1446 AGCTATTATATCTTGAAAATAGAGTTGCACTTGCTCGGTTGCTCTTTCCAATGGAAGCGA 1505

Qy       1346 GAGTAGCAATGGATATTGCTCAAGTGGATGGAACTTTGGAATTTAACCTGGGTTCTGGTG 1405

Db       1506 AAGTGGCTATGGATATTGCTCAAGTGGACGGAACTTCTGAATTCACATTGT--------- 1556

Qy       1406 CAAATCCACCTCCTGAAAGACAACGGACAACTGTTGATCTAAATGAAAGTCCTTTCATAA 1465

Db       1557 CAAAGAATATAGCTGATGCACGAAGAAATGCGGTGGACTTGAATGAGGCTCCCTTTATAT 1616

Qy       1466 TGAAAGAAGAACACTTAGCTCGGATGACAGCACTCTCCAAAACAGTGGAGCTCGGGAAAC 1525

Db       1617 TGAAAGAGGAGCATTTGCAGAGGATGAAAGCACTGTCTAAAACTGTTGAGCTTGGCAAGC 1676

Qy       1526 GCTTTTTCCCGCGATGTTCGAACGTGCTCGACAAGATCATG------GATGATGAAACTG 1579

Db       1677 GTTTCTTTCCACGCTGCTCCGATGTTCTTAATAAGATTATGGACGCCGAAGATCTATCAC 1736

Qy       1580 ATCCGGTTTCCCTCGGAAGAGACACGTCCGCGGA---------GAAGAGGAAGAGGTTTC 1630

Db       1737 AGCTTGCATTTTTAGGAAAAGATACTCCAGAGGAACGGCAAAGGAAGAGAAAACGATACC 1796

Qy       1631 ATGACCTGCAGGATGTTCTTCAGAAGGCATTCCACGAGGACAAGGAGGAGAATGACAGGT 1690

Db       1797 TTGAACTGCAAGACGCTTTAACTAAGGCTTTTACAGAGGACAAAGAAGAGTTTGACCGTT 1856

Qy       1691 CGGGGCTCTCGTCGTCGTCGTCATCGACATCGATCGGG 1728

Db       1857 CTACATTATCATCATCGTCGTCGTCGACTCCAATGGGG 1894
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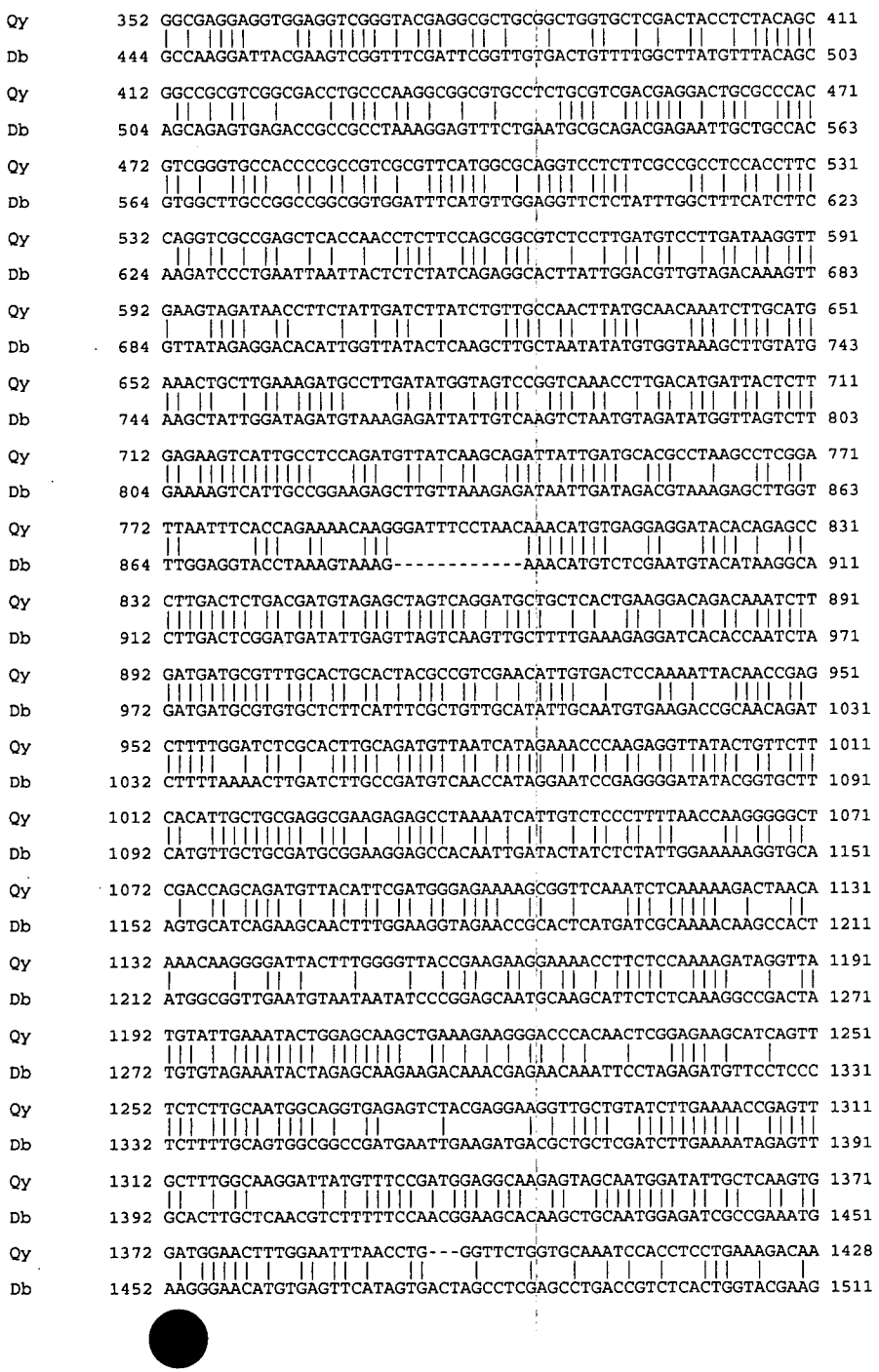
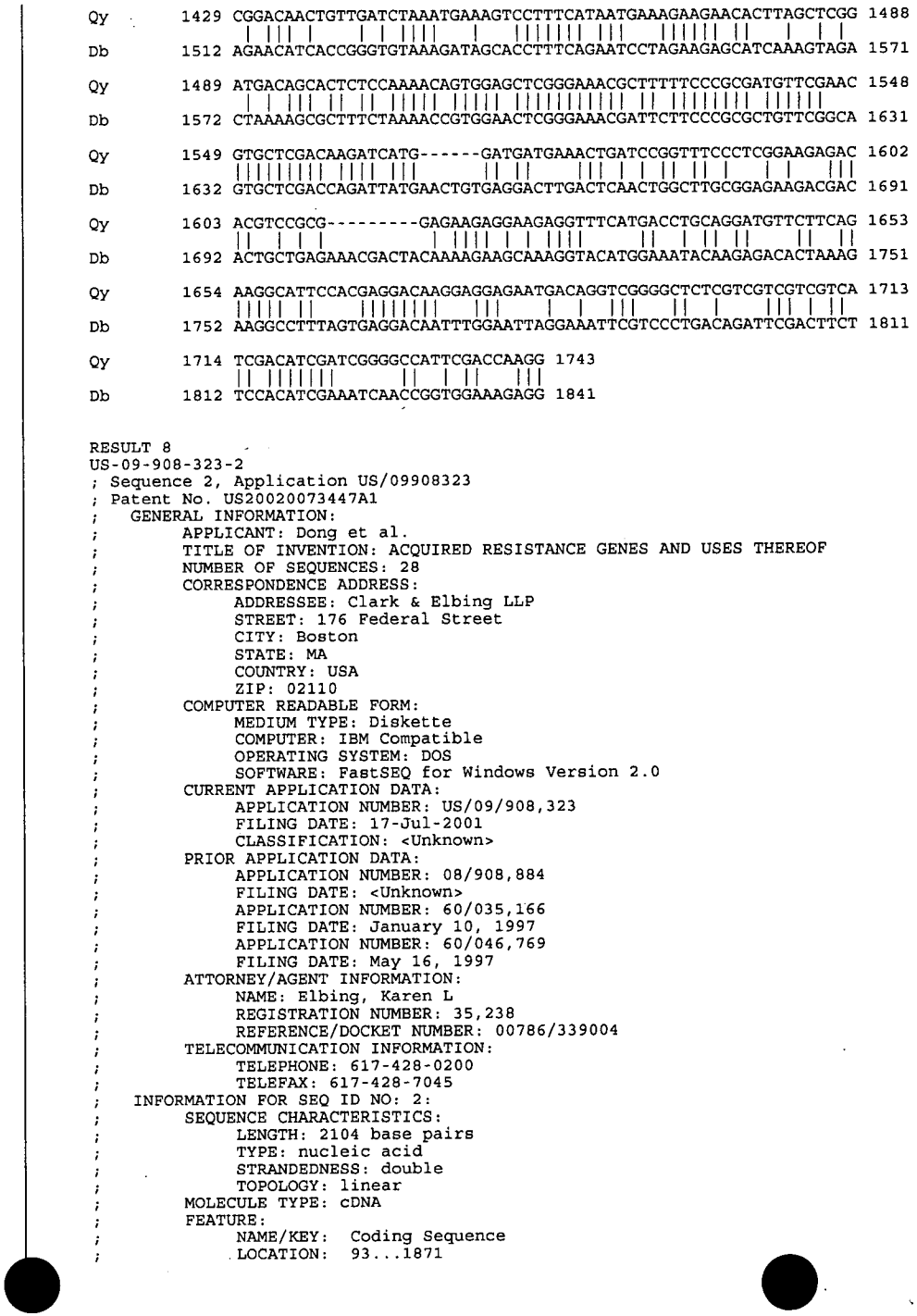
RESULT 7
US-08-908-884-2
; Sequence 2, Application US/08908884
; Publication No. US20020138872A1
; GENERAL INFORMATION:
; APPLICANT: Dong et al.
; TITLE OF INVENTION: ACQUIRED RESISTANCE GENES AND USES THEREOF
; NUMBER OF SEQUENCES: 28
; CORRESPONDENCE ADDRESS:
; ADDRESSEE: Clark & Elbing LLP
; STREET: 176 Federal Street
; CITY: Boston
; STATE: MA
; COUNTRY: USA
; ZIP: 02110
; COMPUTER READABLE FORM:
; MEDIUM TYPE: Diskette
; COMPUTER: IBM Compatible
; OPERATING SYSTEM: DOS
; SOFTWARE: FastSEQ for Windows Version 2.0
; CURRENT APPLICATION DATA:
; APPLICATION NUMBER: US/08/908,884
; FILING DATE:
; CLASSIFICATION: 800
; PRIOR APPLICATION DATA:
; APPLICATION NUMBER: 60/023,851
; FILING DATE: August 9, 1996
; APPLICATION NUMBER: 60/035,166
; FILING DATE: January 10, 1997
; APPLICATION NUMBER: 60/046,769
; FILING DATE: May 16, 1997
; ATTORNEY/AGENT INFORMATION:
; NAME: Elbing, Karen L
; REGISTRATION NUMBER: 35,238
; REFERENCE/DOCKET NUMBER: 00786/339004
; TELECOMMUNICATION INFORMATION:
; TELEPHONE: 617-428-0200
; TELEFAX: 617-428-7045
; INFORMATION FOR SEQ ID NO: 2:
; SEQUENCE CHARACTERISTICS:
; LENGTH: 2104 base pairs
; TYPE: nucleic acid
; STRANDEDNESS: double
; TOPOLOGY: linear
; MOLECULE TYPE: cDNA
; FEATURE:
; NAME/KEY: Coding Sequence
; LOCATION: 93...1871
; OTHER INFORMATION:
US-08-908-884-2

Query Match 20.7%; Score 422.2; DB 8; Length 2104;
Best Local Similarity 58.4%; Pred. No. 2.2e-87;
Matches 824; Conservative 0; Mismatches 556; Indels 30; Gaps 4;





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RESULT 8
US-09-908-323-2
; Sequence 2, Application US/09908323
; Patent No. US20020073447A1
;   GENERAL INFORMATION:
;        APPLICANT: Dong et al.
;        TITLE OF INVENTION: ACQUIRED RESISTANCE GENES AND USES THEREOF
;        NUMBER OF SEQUENCES: 28
;        CORRESPONDENCE ADDRESS:
;             ADDRESSEE: Clark & Elbing LLP
;             STREET: 176 Federal Street
;             CITY: Boston
;             STATE: MA
;             COUNTRY: USA
;             ZIP: 02110
;        COMPUTER READABLE FORM:
;             MEDIUM TYPE: Diskette
;             COMPUTER: IBM Compatible
;             OPERATING SYSTEM: DOS
;             SOFTWARE: FastSEQ for Windows Version 2.0
;        CURRENT APPLICATION DATA:
;             APPLICATION NUMBER: US/09/908,323
;             FILING DATE: 17-Jul-2001
;             CLASSIFICATION: <Unknown>
;        PRIOR APPLICATION DATA:
;             APPLICATION NUMBER: 08/908,884
;             FILING DATE: <Unknown>
;             APPLICATION NUMBER: 60/035,166
;             FILING DATE: January 10, 1997
;             APPLICATION NUMBER: 60/046,769
;             FILING DATE: May 16, 1997
;        ATTORNEY/AGENT INFORMATION:
;             NAME: Elbing, Karen L
;             REGISTRATION NUMBER: 35,238
;             REFERENCE/DOCKET NUMBER: 00786/339004
;        TELECOMMUNICATION INFORMATION:
;             TELEPHONE: 617-428-0200
;             TELEFAX: 617-428-7045
;   INFORMATION FOR SEQ ID NO: 2:
;        SEQUENCE CHARACTERISTICS:
;             LENGTH: 2104 base pairs
;             TYPE: nucleic acid
;             STRANDEDNESS: double
;             TOPOLOGY: linear
;        MOLECULE TYPE: cDNA
;        FEATURE:
;             NAME/KEY:  Coding Sequence
;             LOCATION:  93...1871
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;           OTHER INFORMATION:
;       SEQUENCE DESCRIPTION: SEQ ID NO: 2:
US-09-908-323-2

  Query Match            20.7%;  Score 422.2;  DB 9;  Length 2104;
  Best Local Similarity  58.4%;  Pred. No. 2.2e-87;
  Matches  824;  Conservative    0;  Mismatches  556;  Indels   30;  Gaps    4;

Qy        352 GGCGAGGAGGTGGAGGTCGGGTACGAGGCGCTGCGGCTGGTGCTCGACTACCTCTACAGC 411
              | | ||||    || ||||| | |||  || |    |   ||  | |  ||  | ||||||
Db        444 GCCAAGGATTACGAAGTCGGTTTCGATTCGGTTGTGACTGTTTTGGCTTATGTTTACAGC 503

Qy        412 GGCCGCGTCGGCGACCTGCCCAAGGCGGCGTGCCTCTGCGTCGACGAGGACTGCGCCCAC 471
              || | ||  |    | ||| || |  | |      ||||  |||||| | |||  ||||
Db        504 AGCAGAGTGAGACCGCCGCCTAAAGGAGTTTCTGAATGCGCAGACGAGAATTGCTGCCAC 563

Qy        472 GTCGGGTGCCACCCCGCCGTCGCGTTCATGGCGCAGGTCCTCTTCGCCGCCTCCACCTTC 531
              || |  ||||  || || || |  |||||  | |||| ||||     || | || ||||
Db        564 GTGGCTTGCCGGCCGGCGGTGGATTTCATGTTGGAGGTTCTCTATTTGGCTTTCATCTTC 623

Qy        532 CAGGTCGCCGAGCTCACCAACCTCTTCCAGCGGCGTCTCCTTGATGTCCTTGATAAGGTT 591
              || || | ||  | |  | ||||  ||| |||    |  | || ||  | || || |||
Db        624 AAGATCCCTGAATTAATTACTCTCTATCAGAGGCACTTATTGGACGTTGTAGACAAAGTT 683

Qy        592 GAAGTAGATAACCTTCTATTGATCTTATCTGTTGCCAACTTATGCAACAAATCTTGCATG 651
              |   ||||  ||    | | ||  |    |||| ||  ||||    ||| |||| |||
Db        684 GTTATAGAGGACACATTGGTTATACTCAAGCTTGCTAATATATGTGGTAAAGCTTGTATG 743

Qy        652 AAACTGCTTGAAAGATGCCTTGATATGGTAGTCCGGTCAAACCTTGACATGATTACTCTT 711
              || ||  | || |||||    || ||  | |||  ||| ||  | || ||| ||| ||||
Db        744 AAGCTATTGGATAGATGTAAAGAGATTATTGTCAAGTCTAATGTAGATATGGTTAGTCTT 803

Qy        712 GAGAAGTCATTGCCTCCAGATGTTATCAAGCAGATTATTGATGCACGCCTAAGCCTCGGA 771
              || ||||||||||    ||| || | ||  |||| ||||||  |||    |   || ||
Db        804 GAAAAGTCATTGCCGGAAGAGCTTGTTAAAGAGATAATTGATAGACGTAAAGAGCTTGGT 863

Qy        772 TTAATTTCACCAGAAAACAAGGGATTTCCTAACAAACATGTGAGGAGGATACACAGAGCC 831
              ||      |||  ||   |||            |||||||   ||   |||| |  ||
Db        864 TTGGAGGTACCTAAAGTAAAG----------AAACATGTCTCGAATGTACATAAGGCA 911

Qy        832 CTTGACTCTGACGATGTAGAGCTAGTCAGGATGCTGCTCACTGAAGGACAGACAAATCTT 891
              |||||||| || ||| | ||| |||||| | ||||  | |  || |  || || |||||
Db        912 CTTGACTCGGATGATATTGAGTTAGTCAAGTTGCTTTTGAAAGAGGATCACACCAATCTA 971

Qy        892 GATGATGCGTTTGCACTGCACTACGCCGTCGAACATTGTGACTCCAAAATTACAACCGAG 951
              |||||||||| ||| || || | ||| || | | |||| |    || |   |||| ||
Db        972 GATGATGCGTGTGCTCTTCATTTCGCTGTTGCATATTGCAATGTGAAGACCGCAACAGAT 1031

Qy        952 CTTTTGGATCTCGCACTTGCAGATGTTAATCATAGAAACCCAAGAGGTTATACTGTTCTT 1011
              |||||  | || |  |||| |||| || |||| || || || || ||||| || |||
Db       1032 CTTTTAAAACTTGATCTTGCCGATGTCAACCATAGGAATCCGAGGGGATATACGGTGCTT 1091

Qy       1012 CACATTGCTGCGAGGCGAAGAGAGCCTAAAATCATTGTCTCCCTTTTAACCAAGGGGGCT 1071
              ||  |||||||| ||| |  |||||  || | ||  | || || ||    || || ||
Db       1092 CATGTTGCTGCGATGCGGAAGGAGCCACAATTGATACTATCTCTATTGGAAAAAGGTGCA 1151

Qy       1072 CGACCAGCAGATGTTACATTCGATGGGAGAAAAGCGGTTCAAATCTCAAAAAGACTAACA 1131
              |  || |||| |  || || || || |||| ||  |   ||| ||||| |   ||
Db       1152 AGTGCATCAGAAGCAACTTTGGAAGGTAGAACCGCACTCATGATCGCAAAACAAGCCACT 1211

Qy       1132 AAACAAGGGGATTACTTTGGGGTTACCGAAGAAGGAAAACCTTCTCCAAAAGATAGGTTA 1191
              |    | || |   |  | || || | || |||| |||||  ||||   |  ||
Db       1212 ATGGCGGTTGAATGTAATAATATCCCGGAGCAATGCAAGCATTCTCTCAAAGGCCGACTA 1271

Qy       1192 TGTATTGAAATACTGGAGCAAGCTGAAAGAAGGGACCCACAACTCGGAGAAGCATCAGTT 1251
              ||| | |||||||| |||||||  || | | | || | |   |  |||| |   |
Db       1272 TGTGTAGAAATACTAGAGCAAGAAGACAAACGAGAACAAATTCCTAGAGATGTTCCTCCC 1331

Qy       1252 TCTCTTGCAATGGCAGGTGAGAGTCTACGAGGAAGGTTGCTGTATCTTGAAAACCGAGTT 1311
              ||| ||||| |||| |  ||      |       | | ||||  ||||||||||  |||||
Db       1332 TCTTTTGCAGTGGCGGCCGATGAATTGAAGATGACGCTGCTCGATCTTGAAAATAGAGTT 1391

Qy       1312 GCTTTGGCAAGGATTATGTTTCCGATGGAGGCAAGAGTAGCAATGGATATTGCTCAAGTG 1371
              ||  | ||      | | ||||| | ||| |||  ||  |||||||| || ||  || ||
Db       1392 GCACTTGCTCAACGTCTTTTTCCAACGGAAGCACAAGCTGCAATGGAGATCGCCGAAATG 1451

Qy       1372 GATGGAACTTTGGAATTTAACCTG---GGTTCTGGTGCAAATCCACCTCCTGAAAGACAA 1428
              | ||||| |  || || |   ||    |   |  |  | |  |  |||  |  |
Db       1452 AAGGGAACATGTGAGTTCATAGTGACTAGCCTCGAGCCTGACCGTCTCACTGGTACGAAG 1511

Qy       1429 CGGACAACTGTTGATCTAAATGAAAGTCCTTTCATAATGAAAGAAGAACACTTAGCTCGG 1488
              | ||| |    | | ||||   |   ||||||| |||   |||||| ||   | | |
Db       1512 AGAACATCACCGGGTGTAAAGATAGCACCTTTCAGAATCCTAGAAGAGCATCAAAGTAGA 1571

Qy       1489 ATGACAGCACTCTCCAAAACAGTGGAGCTCGGGAAACGCTTTTTCCCGCGATGTTCGAAC 1548
              | | ||| || || ||||| |||| |||||||||| || |||||||| ||||||
Db       1572 CTAAAAGCGCTTTCTAAAACCGTGGAACTCGGGAAACGATTCTTCCCGCGCTGTTCGGCA 1631

Qy       1549 GTGCTCGACAAGATCATG------GATGATGAAACTGATCCGGTTTCCCTCGGAAGAGAC 1602
              |||||||| |||| |||      || ||    ||| | | || || |   | |   |||
Db       1632 GTGCTCGACCAGATTATGAACTGTGAGGACTTGACTCAACTGGCTTGCGGAGAAGACGAC 1691

Qy       1603 ACGTCCGCG---------GAGAAGAGGAAGAGGTTTCATGACCTGCAGGATGTTCTTCAG 1653
              ||  | | |         | |||| | | ||||     ||  | || ||    ||  ||
Db       1692 ACTGCTGAGAAACGACTACAAAAGAAGCAAAGGTACATGGAAATACAAGAGACACTAAAG 1751

Qy       1654 AAGGCATTCCACGAGGACAAGGAGGAGAATGACAGGTCGGGGCTCTCGTCGTCGTCGTCA 1713
              ||||| ||     |||||||   |||    | | |||   ||  |    ||| | ||
Db       1752 AAGGCCTTTAGTGAGGACAATTTGGAATTAGGAAATTCGTCCCTGACAGATTCGACTTCT 1811

Qy       1714 TCGACATCGATCGGGGCCATTCGACCAAGG 1743
              || |||||||     ||  | ||   |||
Db       1812 TCCACATCGAAATCAACCGGTGGAAAGAGG 1841


RESULT 9
US-09-934-455-73
; Sequence 73, Application US/09934455
; Publication No. US20030121070A1
; GENERAL INFORMATION:
;  APPLICANT: Adam, Luc
;  APPLICANT:  Creelman, Robert
;  APPLICANT:  Dubell, Arnold
;  APPLICANT:  Heard, Jacqueline
;  APPLICANT:  Jiang, Cai-Zhong
;  APPLICANT:  Keddie, James
;  APPLICANT:  Pilgrim, Marsha
;  APPLICANT:  Ratcliffe, Oliver
;  APPLICANT:  Reuber, Lynne
;  APPLICANT:  Riechmann, Jose Luis
;  APPLICANT:  Yu, Guo-Liang
;  APPLICANT:  Pineda, Omaira
;  TITLE OF INVENTION: Genes for Modifying Plant Traits IV
;  FILE REFERENCE: MBI-0025
;  CURRENT APPLICATION NUMBER: US/09/934,455
;  CURRENT FILING DATE:  2001-08-22
;  PRIOR APPLICATION NUMBER: 60/227439
;  PRIOR FILING DATE: 2000-08-22
;  PRIOR APPLICATION NUMBER: MBI-0022
;  PRIOR FILING DATE: 2001-11-16
;  PRIOR APPLICATION NUMBER: MBI-0023
;  PRIOR FILING DATE: 2001-04-17
;  NUMBER OF SEQ ID NOS: 516
;  SOFTWARE: PatentIn version 3.i
; SEQ ID NO 73
;   LENGTH: 2104
;   TYPE: DNA
;   ORGANISM: Arabidopsis thaliana
;   FEATURE:
;   NAME/KEY: CDS
;   LOCATION: (93)..(1874)
;   OTHER INFORMATION: G278
US-09-934-455-73

  Query Match            20.7%;  Score 422.2;  DB 11;  Length 2104;
  Best Local Similarity  58.4%;  Pred. No. 2.2e-87;
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Matches 824; Conservative 0; Mismatches 556; Indels 30; Gaps 4;

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Qy       352 GGCGAGGAGGTGGAGGTCGGGTACGAGGCGCTGCGGCTGGTGCTCGACTACCTCTACAGC 411
Db       444 GCCAAGGATTACGAAGTCGGTTTCGATTCGGTTGTGACTGTTTTGGCTTATGTTTACAGC 503

Qy       412 GGCCGCGTCGGCGACCTGCCCAAGGCGGCGTGCCTCTGCGTCGACGAGGACTGCGCCCAC 471
Db       504 AGCAGAGTGAGACCGCCGCCTAAAGGAGTTTCTGAATGCGCAGACGAGAATTGCTGCCAC 563

Qy       472 GTCGGGTGCCACCCCGCCGTCGCGTTCATGGCGCAGGTCCTCTTCGCCGCCTCCACCTTC 531
Db       564 GTGGCTTGCCGGCCGGCGGTGGATTTCATGTTGGAGGTTCTCTATTTGGCTTTCATCTTC 623

Qy       532 CAGGTCGCCGAGCTCACCAACCTCTTCCAGCGGCGTCTCCTTGATGTCCTTGATAAGGTT 591
Db       624 AAGATCCCTGAATTAATTACTCTCTATCAGAGGCACTTATTGGACGTTGTAGACAAAGTT 683

Qy       592 GAAGTAGATAACCTTCTATTGATCTTATCTGTTGCCAACTTATGCAACAAATCTTGCATG 651
Db       684 GTTATAGAGGACACATTGGTTATACTCAAGCTTGCTAATATATGTGGTAAAGCTTGTATG 743

Qy       652 AAACTGCTTGAAAGATGCCTTGATATGGTAGTCCGGTCAAACCTTGACATGATTACTCTT 711
Db       744 AAGCTATTGGATAGATGTAAAGAGATTATTGTCAAGTCTAATGTAGATATGGTTAGTCTT 803

Qy       712 GAGAAGTCATTGCCTCCAGATGTTATCAAGCAGATTATTGATGCACGCCTAAGCCTCGGA 771
Db       804 GAAAAGTCATTGCCGGAAGAGCTTGTTAAAGAGATAATTGATAGACGTAAAGAGCTTGGT 863

Qy       772 TTAATTTCACCAGAAAACAAGGGATTTCCTAACAAACATGTGAGGAGGATACACAGAGCC 831
Db       864 TTGGAGGTACCTAAAGTAAAG----------AAACATGTCTCGAATGTACATAAGGCA 911

Qy       832 CTTGACTCTGACGATGTAGAGCTAGTCAGGATGCTGCTCACTGAAGGACAGACAAATCTT 891
Db       912 CTTGACTCGGATGATATTGAGTTAGTCAAGTTGCTTTTGAAAGAGGATCACACCAATCTA 971

Qy       892 GATGATGCGTTTGCACTGCACTACGCCGTCGAACATTGTGACTCCAAAATTACAACCGAG 951
Db       972 GATGATGCGTGTGCTCTTCATTTCGCTGTTGCATATTGCAATGTGAAGACCGCAACAGAT 1031

Qy       952 CTTTTGGATCTCGCACTTGCAGATGTTAATCATAGAAACCCAAGAGGTTATACTGTTCTT 1011
Db      1032 CTTTTAAAACTTGATCTTGCCGATGTCAACCATAGGAATCCGAGGGGATATACGGTGCTT 1091

Qy      1012 CACATTGCTGCGAGGCGAAGAGAGCCTAAAATCATTGTCTCCCTTTTAACCAAGGGGGCT 1071
Db      1092 CATGTTGCTGCGATGCGGAAGGAGCCACAATTGATACTATCTCTATTGGAAAAAGGTGCA 1151

Qy      1072 CGACCAGCAGATGTTACATTCGATGGGAGAAAAGCGGTTCAAATCTCAAAAAGACTAACA 1131
Db      1152 AGTGCATCAGAAGCAACTTTGGAAGGTAGAACCGCACTCATGATCGCAAAACAAGCCACT 1211

Qy      1132 AAACAAGGGGATTACTTTGGGGTTACCGAAGAAGGAAAACCTTCTCCAAAAGATAGGTTA 1191
Db      1212 ATGGCGGTTGAATGTAATAATATCCCGGAGCAATGCAAGCATTCTCTCAAAGGCCGACTA 1271

Qy      1192 TGTATTGAAATACTGGAGCAAGCTGAAAGAAGGGACCCACAACTCGGAGAAGCATCAGTT 1251
Db      1272 TGTGTAGAAATACTAGAGCAAGAAGACAAACGAGAACAAATTCCTAGAGATGTTCCTCCC 1331

Qy      1252 TCTCTTGCAATGGCAGGTGAGAGTCTACGAGGAAGGTTGCTGTATCTTGAAAACCGAGTT 1311
Db      1332 TCTTTTGCAGTGGCGGCCGATGAATTGAAGATGACGCTGCTCGATCTTGAAAATAGAGTT 1391

Qy      1312 GCTTTGGCAAGGATTATGTTTCCGATGGAGGCAAGAGTAGCAATGGATATTGCTCAAGTG 1371
Db      1392 GCACTTGCTCAACGTCTTTTTCCAACGGAAGCACAAGCTGCAATGGAGATCGCCGAAATG 1451

Qy      1372 GATGGAACTTTGGAATTTAACCTG---GGTTCTGGTGCAAATCCACCTCCTGAAAGACAA 1428
Db      1452 AAGGGAACATGTGAGTTCATAGTGACTAGCCTCGAGCCTGACCGTCTCACTGGTACGAAG 1511

Qy      1429 CGGACAACTGTTGATCTAAATGAAAGTCCTTTCATAATGAAAGAAGAACACTTAGCTCGG 1488
Db      1512 AGAACATCACCGGGTGTAAAGATAGCACCTTTCAGAATCCTAGAAGAGCATCAAAGTAGA 1571

Qy      1489 ATGACAGCACTCTCCAAAACAGTGGAGCTCGGGAAACGCTTTTTCCCGCGATGTTCGAAC 1548
Db      1572 CTAAAAGCGCTTTCTAAAACCGTGGAACTCGGGAAACGATTCTTCCCGCGCTGTTCGGCA 1631

Qy      1549 GTGCTCGACAAGATCATG------GATGATGAAACTGATCCGGTTTCCCTCGGAAGAGAC 1602
Db      1632 GTGCTCGACCAGATTATGAACTGTGAGGACTTGACTCAACTGGCTTGCGGAGAAGACGAC 1691

Qy      1603 ACGTCCGCG---------GAGAAGAGGAAGAGGTTTCATGACCTGCAGGATGTTCTTCAG 1653
Db      1692 ACTGCTGAGAAACGACTACAAAAGAAGCAAAGGTACATGGAAATACAAGAGACACTAAAG 1751

Qy      1654 AAGGCATTCCACGAGGACAAGGAGGAGAATGACAGGTCGGGGCTCTCGTCGTCGTCGTCA 1713
Db      1752 AAGGCCTTTAGTGAGGACAATTTGGAATTAGGAAATTCGTCCCTGACAGATTCGACTTCT 1811

Qy      1714 TCGACATCGATCGGGGCCATTCGACCAAGG 1743
Db      1812 TCCACATCGAAATCAACCGGTGGAAAGAGG 1841
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RESULT 10
US-10-225-068-241
; Sequence 241, Application US/10225068
; Publication No. US20030217383A1
; GENERAL INFORMATION:
; APPLICANT: Mendel Biotechnology, Inc.
; APPLICANT: Reuber, T. Lynne
; APPLICANT: Riechmann, Jose Luis
; APPLICANT: Heard, Jacqueline E.
; APPLICANT: Jiang, Cai-Zhong
; APPLICANT: Adam, Luc J.
; APPLICANT: Dubell, Arnold T.
; APPLICANT: Ratcliffe, Oliver
; APPLICANT: Pineda, Omaira
; APPLICANT: Yu, Guo-Liang
; APPLICANT: Broun, Pierre E.
; TITLE OF INVENTION: STRESS-RELATED POLYNUCLEOTIDES AND
; TITLE OF INVENTION: POLYPEPTIDES IN PLANTS
; FILE REFERENCE: 514442002040
; CURRENT APPLICATION NUMBER: US/10/225,068
; CURRENT FILING DATE: 2002-08-09
; PRIOR APPLICATION NUMBER: 60/310,847
; PRIOR FILING DATE: 2001-08-09
; PRIOR APPLICATION NUMBER: 60/336,049
; PRIOR FILING DATE: 2001-11-19
; PRIOR APPLICATION NUMBER: 60/338,692
; PRIOR FILING DATE: 2001-12-11
; PRIOR APPLICATION NUMBER: 10/171,468
; PRIOR FILING DATE: 2002-06-14
; NUMBER OF SEQ ID NOS: 246
; SOFTWARE: FastSEQ for Windows Version 4.0
; SEQ ID NO 241
; LENGTH: 2104
; TYPE: DNA
; ORGANISM: Arabidopsis thaliana
; FEATURE:
; NAME/KEY: CDS
; LOCATION: (93)...(1874)
US-10-225-068-241

Query Match 20.7%; Score 422.2; DB 12; Length 2104;
Best Local Similarity 58.4%; Pred. No. 2.2e-87;
Matches 824; Conservative 0; Mismatches 556; Indels 30; Gaps 4;

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Qy       352 GGCGAGGAGGTGGAGGTCGGGTACGAGGCGCTGCGGCTGGTGCTCGACTACCTCTACAGC 411
Db       444 GCCAAGGATTACGAAGTCGGTTTCGATTCGGTTGTGACTGTTTTGGCTTATGTTTACAGC 503
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Qy       412 GGCCGCGTCGGCGACCTGCCCAAGGCGGCGTGCCTCTGCGTCGACGAGGACTGCGCCCAC 471
Db       504 AGCAGAGTGAGACCGCCGCCTAAAGGAGTTTCTGAATGCGCAGACGAGAATTGCTGCCAC 563

Qy       472 GTCGGGTGCCACCCCGCCGTCGCGTTCATGGCGCAGGTCCTCTTCGCCGCCTCCACCTTC 531
Db       564 GTGGCTTGCCGGCCGGCGGTGGATTTCATGTTGGAGGTTCTCTATTTGGCTTTCATCTTC 623

Qy       532 CAGGTCGCCGAGCTCACCAACCTCTTCCAGCGGCGTCTCCTTGATGTCCTTGATAAGGTT 591
Db       624 AAGATCCCTGAATTAATTACTCTCTATCAGAGGCACTTATTGGACGTTGTAGACAAAGTT 683

Qy       592 GAAGTAGATAACCTTCTATTGATCTTATCTGTTGCCAACTTATGCAACAAATCTTGCATG 651
Db       684 GTTATAGAGGACACATTGGTTATACTCAAGCTTGCTAATATATGTGGTAAAGCTTGTATG 743

Qy       652 AAACTGCTTGAAAGATGCCTTGATATGGTAGTCCGGTCAAACCTTGACATGATTACTCTT 711
Db       744 AAGCTATTGGATAGATGTAAAGAGATTATTGTCAAGTCTAATGTAGATATGGTTAGTCTT 803

Qy       712 GAGAAGTCATTGCCTCCAGATGTTATCAAGCAGATTATTGATGCACGCCTAAGCCTCGGA 771
Db       804 GAAAAGTCATTGCCGGAAGAGCTTGTTAAAGAGATAATTGATAGACGTAAAGAGCTTGGT 863

Qy       772 TTAATTTCACCAGAAAACAAGGGATTTCCTAACAAACATGTGAGGAGGATACACAGAGCC 831
Db       864 TTGGAGGTACCTAAAGTAAAG----------AAACATGTCTCGAATGTACATAAGGCA 911

Qy       832 CTTGACTCTGACGATGTAGAGCTAGTCAGGATGCTGCTCACTGAAGGACAGACAAATCTT 891
Db       912 CTTGACTCGGATGATATTGAGTTAGTCAAGTTGCTTTTGAAAGAGGATCACACCAATCTA 971

Qy       892 GATGATGCGTTTGCACTGCACTACGCCGTCGAACATTGTGACTCCAAAATTACAACCGAG 951
Db       972 GATGATGCGTGTGCTCTTCATTTCGCTGTTGCATATTGCAATGTGAAGACCGCAACAGAT 1031

Qy       952 CTTTTGGATCTCGCACTTGCAGATGTTAATCATAGAAACCCAAGAGGTTATACTGTTCTT 1011
Db      1032 CTTTTAAAACTTGATCTTGCCGATGTCAACCATAGGAATCCGAGGGGATATACGGTGCTT 1091

Qy      1012 CACATTGCTGCGAGGCGAAGAGAGCCTAAAATCATTGTCTCCCTTTTAACCAAGGGGGCT 1071
Db      1092 CATGTTGCTGCGATGCGGAAGGAGCCACAATTGATACTATCTCTATTGGAAAAAGGTGCA 1151

Qy      1072 CGACCAGCAGATGTTACATTCGATGGGAGAAAAGCGGTTCAAATCTCAAAAAGACTAACA 1131
Db      1152 AGTGCATCAGAAGCAACTTTGGAAGGTAGAACCGCACTCATGATCGCAAAACAAGCCACT 1211

Qy      1132 AAACAAGGGGATTACTTTGGGGTTACCGAAGAAGGAAAACCTTCTCCAAAAGATAGGTTA 1191
Db      1212 ATGGCGGTTGAATGTAATAATATCCCGGAGCAATGCAAGCATTCTCTCAAAGGCCGACTA 1271

Qy      1192 TGTATTGAAATACTGGAGCAAGCTGAAAGAAGGGACCCACAACTCGGAGAAGCATCAGTT 1251
Db      1272 TGTGTAGAAATACTAGAGCAAGAAGACAAACGAGAACAAATTCCTAGAGATGTTCCTCCC 1331

Qy      1252 TCTCTTGCAATGGCAGGTGAGAGTCTACGAGGAAGGTTGCTGTATCTTGAAAACCGAGTT 1311
Db      1332 TCTTTTGCAGTGGCGGCCGATGAATTGAAGATGACGCTGCTCGATCTTGAAAATAGAGTT 1391

Qy      1312 GCTTTGGCAAGGATTATGTTTCCGATGGAGGCAAGAGTAGCAATGGATATTGCTCAAGTG 1371
Db      1392 GCACTTGCTCAACGTCTTTTTCCAACGGAAGCACAAGCTGCAATGGAGATCGCCGAAATG 1451

Qy      1372 GATGGAACTTTGGAATTTAACCTG---GGTTCTGGTGCAAATCCACCTCCTGAAAGACAA 1428
Db      1452 AAGGGAACATGTGAGTTCATAGTGACTAGCCTCGAGCCTGACCGTCTCACTGGTACGAAG 1511

Qy      1429 CGGACAACTGTTGATCTAAATGAAAGTCCTTTCATAATGAAAGAAGAACACTTAGCTCGG 1488
Db      1512 AGAACATCACCGGGTGTAAAGATAGCACCTTTCAGAATCCTAGAAGAGCATCAAAGTAGA 1571

Qy      1489 ATGACAGCACTCTCCAAAACAGTGGAGCTCGGGAAACGCTTTTTCCCGCGATGTTCGAAC 1548
Db      1572 CTAAAAGCGCTTTCTAAAACCGTGGAACTCGGGAAACGATTCTTCCCGCGCTGTTCGGCA 1631

Qy      1549 GTGCTCGACAAGATCATG------GATGATGAAACTGATCCGGTTTCCCTCGGAAGAGAC 1602
Db      1632 GTGCTCGACCAGATTATGAACTGTGAGGACTTGACTCAACTGGCTTGCGGAGAAGACGAC 1691

Qy      1603 ACGTCCGCG---------GAGAAGAGGAAGAGGTTTCATGACCTGCAGGATGTTCTTCAG 1653
Db      1692 ACTGCTGAGAAACGACTACAAAAGAAGCAAAGGTACATGGAAATACAAGAGACACTAAAG 1751

Qy      1654 AAGGCATTCCACGAGGACAAGGAGGAGAATGACAGGTCGGGGCTCTCGTCGTCGTCGTCA 1713
Db      1752 AAGGCCTTTAGTGAGGACAATTTGGAATTAGGAAATTCGTCCCTGACAGATTCGACTTCT 1811

Qy      1714 TCGACATCGATCGGGGCCATTCGACCAAGG 1743
Db      1812 TCCACATCGAAATCAACCGGTGGAAAGAGG 1841
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RESULT 11
US-10-328-675A-5
; Sequence 5, Application US/10328675A
; Publication No. US20030159171A1
; GENERAL INFORMATION:
; APPLICANT: Salmeron, John
; APPLICANT: Weislo, Laura
; APPLICANT: Willits, Michael
; TITLE OF INVENTION: NOVEL PLANT GENES AND USES THEREOF
; FILE REFERENCE: 30857USNPDIV1
; CURRENT APPLICATION NUMBER: US/10/328,675A
; CURRENT FILING DATE: 2002-12-23
; PRIOR APPLICATION NUMBER: 09/519,232
; PRIOR FILING DATE: 2000-03-06
; PRIOR APPLICATION NUMBER: 60/219,338
; PRIOR FILING DATE: 1999-03-09
; NUMBER OF SEQ ID NOS: 74
; SOFTWARE: PatentIn Ver. 2.1
; SEQ ID NO 5
; LENGTH: 1740
; TYPE: DNA
; ORGANISM: Brassica napus
; FEATURE:
; NAME/KEY: CDS
; LOCATION: (1)..(1737)
; OTHER INFORMATION: Canola cDNA sequence
; FEATURE:
; NAME/KEY: misc_feature
; LOCATION: (6)...(6)
; OTHER INFORMATION: Xaa is either Gly or Arg
; FEATURE:
; NAME/KEY: misc_feature
; LOCATION: (19)...(19)
; OTHER INFORMATION: Xaa is either Leu or Pro
; FEATURE:
; NAME/KEY: misc_feature
; LOCATION: (34)...(34)
; OTHER INFORMATION: Xaa is either Tyr or Phe
; FEATURE:
; NAME/KEY: misc_feature
; LOCATION: (39)...(39)
; OTHER INFORMATION: Xaa is either Phe or Leu
; FEATURE:
; NAME/KEY: misc_feature
; LOCATION: (97)...(97)
; OTHER INFORMATION: Xaa is either Ala or Thr
; FEATURE:
; NAME/KEY: misc_feature
; LOCATION: (151)...(151)
; OTHER INFORMATION: Xaa is either Glu or Asp
; FEATURE:
; NAME/KEY: misc_feature

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;   LOCATION: (196)...(196)
;   OTHER INFORMATION: Xaa is either Asn or Ile
;   FEATURE:
;   NAME/KEY: misc_feature
;   LOCATION: (242)...(242)
;   OTHER INFORMATION: Xaa is either Asp or Asn
US-10-328-675A-5

  Query Match             18.7%;  Score 381.8;  DB 12;  Length 1740;
  Best Local Similarity   58.4%;  Pred. No. 4.4e-78;
  Matches  812;  Conservative    3;  Mismatches  510;  Indels   66;  Gaps    6;

Qy        351 CGGCGAGGAGGTGGAGGTCGGGTACGAGGCGCTGCGGCTGGTGCTCGACTACCTCTACAG 410
Db        345 CGCGGCGGAATACGACGTCGGGTTCGATTCTGTGGTGGCTGTTCTGGCGTACGTTTACAG 404
Qy        411 CGGCCGCGTCGGCGACCTGCCCAAGGCGGCGTGCCTCTGCGTCGACGAGGACTGCGCCCA 470
Db        405 CGGCAGAGTGAGGCCGCCTCCGAAGGGAGTTTCTGAATGCGCAGACGAKAGCTGCTGCCA 464
Qy        471 CGTCGGGTGCCACCCCGCCGTCGCGTTCATGGCGCAGGTCCTCTTCGCCGCCTCCACCTT 530
Db        465 CGTGGCGTGCCGTCCGGCTGTGGATTTCATGGTGGAGGTTCTCTACTTGGCTTTCGTCTT 524
Qy        531 CCAGGTCGCCGAGCTCACCAACCTCTTCCAGCGGCGTCTCCTTGATGTCCTTGATAAGGT 590
Db        525 CCAGATTCAGGAACTGGTTACCATGTATCAGAGGCATTTACTGGATGTTGTAGACAAAGT 584
Qy        591 TGAAGTAGATAACCTTCTATTGATCTTATCTGTTGCCAACTTATGCAACAAATCTTGCAT 650
Db        585 TAWCATAGAAGACACTTTGGTCGTCCTCAAGCTTGCTAACATCTGCGGTAAAGCGTGCAA 644
Qy        651 GAAACTGCTTGAAAGATGCCTTGATATGGTAGTCCGGTCAAACCTTGACATGATTACTCT 710
Db        645 GAAGCTATTCGATAAGTGCAGAGAGATCATTGTCAAGTCTAACGTGGATGTTGTTACTCT 704
Qy        711 TGAGAAGTCATTGCCTCCAGATGTTATCAAGCAGATTATTGATGCACGCCTAAGCCTCGG 770
Db        705 AAAGAAGTCATTGCCTGAGRACATTGCCAAGCAAGTAATCGATATCCGCAAAGAGCTCGG 764
Qy        771 ATTAATTTCACCAGAAAACAAGGGATTTCCTAACAAACATGTGAGGAGGATACACAGAGC 830
Db        765 CTTGGAGGTAGCTGAA------------CCAGAGAAACATGTCTCCAACATACACAAGGC 812
Qy        831 CCTTGACTCTGACGATGTAGAGCTAGTCAGGATGCTGCTCACTGAAGGACAGACAAATCT 890
Db        813 GCTTGAGTCAGACGATCTTGACCTTGTCGTTATGCTTTTGAAAGAGGGCCACACGAATCT 872
Qy        891 TGATGATGCGTTTGCACTGCACTACGCCGTCGAACATTGTGACTCCAAAATTACAACCGA 950
Db        873 AGACGAAGCGTATGCTCTCCATTTGCTGTTGCGTATTGCGATGAGAAGACAGCGAGGAA 932
Qy        951 GCTTTTGGATCTCGCACTTGCAGATGTTAATCATAGAAACCCAAGAGGTTATACTGTTCT 1010
Db        933 TCTCCTGGAACTGGGGTTTGCGGATGTCAACCGGAGAAACCCGAGAGGGTACACGGTAAT 992
Qy       1011 TCACATTGCTGCGAGGCGAAGAGAGCCTAAAATCATTGTCTCCCTTTTAACCAAGGGGGC 1070
Db        993 TCACGTCGCTGCGATGAGGAAAGAGCCGACACTGATAGCATTGTTGTTGACGAAAGGGGC 1052
Qy       1071 TCGACCAGCAGATGTTACATTCGATGGGAGAAAAGCGGTTCAAATCTCAAAAAGACTAAC 1130
Db       1053 TAATGCATTAGAAATGTCTTTGGACGGGAGAACTGCTCTGTTGATCGCGAAACAAGTCAC 1112
Qy       1131 AAAACAAGGGGATTACTTTGGGGTTACCGAAGAAGGAAAACCTTCTCCAAAAGATAGGTT 1190
Db       1113 TA---AGGCGGCCGAGTGTTGTATTCTGGAGAAAGGGAAGTTAGCTGCCAAAGGCGGAGT 1169
Qy       1191 ATGTATTGAAATACTGGAGCAAGCTGAAAGAA---GGGACCCACAACTCGGAGAAGCATC 1247
Db       1170 ATGTGTAGAGATACTCAAGCAACCAGACAACACACGAGAACCATTTCCTGAAGATGTTTC 1229
Qy       1248 AGTTTCTCTTGCAATGGCAGGTGAGAGTCTACGAGGAAGGTTGCTGTATCTTGAAAACCG 1307
Db       1230 TCCCTCCCTTGCAGTGGCTGCTGATCAATTCAAGATAAGGTTGATTGATCTTGAAAACAG 1289
Qy       1308 AGTTGCTTTGGCAAGGATTATGTTTCCGATGGAGGCAAGAGTAGCAATGGATATTGCTCA 1367
Db       1290 AGTTCAAATGGCTCGATGTCTCTATCCAATGGAAGCACAAGTTGCAATGGATTTCGCCCG 1349
Qy       1368 AGTGGATGGAACTTTGGAATTTAACCTGGGTTCTGGTGCAAATCCACCTCCTGAAAGACA 1427
Db       1350 AATGAAGGGAACACGCGAGTTTGTCGTG-------------------------------- 1377
Qy       1428 ACGGACAACTGTTGATCTAAATGAAAGTCCTTTCATAATGAAAGAAGAACACTTAGCTCG 1487
Db       1378 -ACGACAGCAACTGACCTACACATGGAACCTTTCAAGTTCGTAGAAATGCATCAGAGTAG 1436
Qy       1488 GATGACAGCACTCTCCAAAACAGTGGAGCTCGGGAAACGCTTTTTCCCGCGATGTTCGAA 1547
Db       1437 ACTAACAGCGCTTTCTAAAACTGTGGAATTCGGGAAACGCTTCTTCCCACGCTGTTCGAA 1496
Qy       1548 CGTGCTCGACAAGATCATGGATGATGA------AACTGATCCGGTTTCCCTCGGAAGAGA 1601
Db       1497 AGTGCTCGATGATATTGTGGACTCTGAGGACTTGACTATACTGGCTCTCGTAGAAGAAGA 1556
Qy       1602 CACGTCCGCG---------GAGAAGAGGAAGAGGTTTCATGACCTGCAGGATGTTCTTCA 1652
Db       1557 CACTCCTGAGCAACGACAACAAAAGAGGCAGAGGTTCATGGAAATACAGGAGATTGTTCA 1616
Qy       1653 GAAGGCATTCCACGAGGACAAGGAGGAGAATGACAGGTCGGGGCTCTCGTCGTCGTCGTC 1712
Db       1617 AATGGCGTTTAGTAAAGACAAGGAGGATCTTGGAAAGTCGTCTCTCTCAGCTTCGTCTTC 1676
Qy       1713 ATCGACATCGA 1723
Db       1677 TTCCACATCCA 1687

RESULT 12
US-10-328-675A-19
; Sequence 19, Application US/10328675A
; Publication No. US20030159171A1
; GENERAL INFORMATION:
;  APPLICANT: Salmeron, John
;  APPLICANT:  Weislo, Laura
;  APPLICANT:  Willits, Michael
;  TITLE OF INVENTION: NOVEL PLANT GENES AND USES THEREOF
;  FILE REFERENCE: 30857USNPDIV1
;  CURRENT APPLICATION NUMBER: US/10/328,675A
;  CURRENT FILING DATE:  2002-12-23
;  PRIOR APPLICATION NUMBER: 09/519,232
;  PRIOR FILING DATE: 2000-03-06
;  PRIOR APPLICATION NUMBER: 60/219,338
;  PRIOR FILING DATE: 1999-03-09
;  NUMBER OF SEQ ID NOS: 74
;  SOFTWARE: PatentIn Ver. 2.1
; SEQ ID NO 19
;   LENGTH: 1803
;   TYPE: DNA
;   ORGANISM: Arabidopsis thaliana
;   FEATURE:
;   NAME/KEY: CDS
;   LOCATION: (1)..(1803)
;   OTHER INFORMATION: AtNMLc4-2 genomic sequence
US-10-328-675A-19

  Query Match             18.6%;  Score 380.4;  DB 12;  Length 1803;
  Best Local Similarity   57.4%;  Pred. No. 9.4e-78;
  Matches  778;  Conservative    0;  Mismatches  551;  Indels   27;  Gaps    4;

Qy        351 CGGCGAGGAGGTGGAGGTCGGGTACGAGGCGCTGCGGCTGGTGCTCGACTACCTCTACAG 410
Db        348 CGCCAGAGATTACGAAGTCGGCTTTGACTCGGTTGTGGCGGTTTTGGCGTATGTTTACAG 407
Qy        411 CGGCCGCGTCGGCGACCTGCCCAAGGCGGCGTGCCTCTGCGTCGACGAGGACTGCGCCCA 470
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Db        408 CGGCAGAGTGAGGTCCCCGCCGAAGGGAGCTTCTGCTTGCGTAGACGACGATTGTTGCCA 467

Qy        471 CGTCGGGTGCCACCCCGCCGTCGCGTTCATGGCGCAGGTCCTCTTCGCCGCCTCCACCTT 530

Db        468 CGTGGCTTGCCGGTCAAAGGTGGATTTCATGGTGGAGGTTCTTTATCTGTCTTTCGTTTT 527

Qy        531 CCAGGTCGCCGAGCTCACCAACCTCTTCCAGCGGCGTCTCCTTGATGTCCTTGATAAGGT 590

Db        528 CCAGATTCAAGAATTAGTTACTCTGTATGAGAGGCAGTTCTTGGAAATTGTAGACAAAGT 587

Qy        591 TGAAGTAGATAACCTTCTATTGATCTTATCTGTTGCCAACTTATGCAACAAATCTTGCAT 650

Db        588 TGTAGTCGAAGACATCTTGGTTATATTCAAGCTTGATACTCTATGTGGTACAACATACAA 647

Qy        651 GAAACTGCTTGAAAGATGCCTTGATATGGTAGTCCGGTCAAACCTTGACATGATTACTCT 710

Db        648 GAAGCTTTTGGATAGATGCATAGAAATTATCGTGAAGTCTGATATAGAACTAGTTAGTCT 707

Qy        711 TGAGAAGTCATTGCCTCCAGATGTTATCAAGCAGATTATTGATGCACGCCTAAGCCTCGG 770

Db        708 TGAGAAGTCTTTACCTCAACACATTTTCAAGCAAATCATAGACATCCGCGAAGCGCTCTG 767

Qy        771 ATTAATTTCACCAGAAAACAAGGGATTTCCTAACAAACATGTGAGGAGGATACACAGAGC 830

Db        768 TCTAGAGCCACCTAAA----------CTAGAAAGGCATGTCAAGAACATATACAAGGC 815

Qy        831 CCTTGACTCTGACGATGTAGAGCTAGTCAGGATGCTGCTCACTGAAGGACAGACAAATCT 890

Db        816 GCTAGACTCAGATGATGTTGAGCTTGTCAAGATGCTTTTGCTAGAAGGACACACCAATCT 875

Qy        891 TGATGATGCGTTTGCACTGCACTACGCCGTCGAACATTGTGACTCCAAAATTACAACCGA 950

Db        876 CGATGAGGCGTATGCTCTTCATTTTGCTATCGCTCACTGCGCTGTGAAGACCGCGTATGA 935

Qy        951 GCTTTTGGATCTCGCACTTGCAGATGTTAATCATAGAAACCCAAGAGGTTATACTGTTCT 1010

Db        936 TCTCCTCGAGCTTGAGCTTGCGGATGTTAACCTTAGAAATCCGAGGGGATACACTGTGCT 995

Qy       1011 TCACATTGCTGCGAGGCGAAGAGAGCCTAAAATCATTGTCTCCCTTTTAACCAAGGGGGC 1070

Db        996 TCATGTTGCTGCGATGCGGAAGGAGCCGAAGTTGATAATATCTTTGTTAATGAAAGGGGC 1055

Qy       1071 TCGACCAGCAGATGTTACATTCGATGGGAGAAAAGCGGTTCAAATCTCAAAAAGACTAAC 1130

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Qy       1131 AAAACAAGGGGATTACTTTGGGGTTACCGAAGAAGGAAAACCTTCTCCAAAAGATAGGTT 1190

Db       1116 TAAAGCGGATGACTACAAAACTAGTACGGAGGACGGTACGCCTTCTCTGAAAGGCGGATT 1175

Qy       1191 ATGTATTGAAATACTGGAGCAAGCTGAAAGAAGGG---ACCCACAACTCGGAGAAGCATC 1247

Db       1176 ATGCATAGAGGTACTTGAGCATGAACAAAAACTAGAATATTTGTCGCCTATAGAGGCTTC 1235

Qy       1248 AGTTTCTCTTGCAATGGCAGGTGAGAGTCTACGAGGAAGGTTGCTGTATCTTGAAAACCG 1307

Db       1236 ACTTTCTCTTCCAGTAACTCCAGAGGAGTTGAGGATGAGGTTGCTCTATTATGAAAACCG 1295

Qy       1308 AGTTGCTTTGGCAAGGATTATGTTTCCGATGGAGGCAAGAGTAGCAATGGATATTGCTCA 1367

Db       1296 AGTTGCACTTGCTCGACTTCTCTTTCCAGTGGAAACTGAAACTGTACAGGGTATTGCCAA 1355

Qy       1368 AGTGGATGGAACTTTGGAATTTA---ACCTGGGTTCTGGTGCAAATCCACCTCCTGAAAG 1424

Db       1356 ATTGGAGGAAACATGCGAGTTTACAGCTTCTAGTCTCGAGCCTGATCATCACATTGGTGA 1415

Qy       1425 ACAACGGACAACTGTTGATCTAAATGAAAGTCCTTTCATAATGAAAGAAGAACACTTAGC 1484

Db       1416 AAAGCGGACATCACTAGACCTAAATATGGCGCCGTTCCAAATCCATGAGAAGCATTTGAG 1475

Qy       1485 TCGGATGACAGCACTCTCCAAAACAGTGGAGCTCGGGAAACGCTTTTTCCCGCGATGTTC 1544

Db       1476 TAGACTAAGAGCACTTTGTAAAACCGTGGAACTGGGGAAACGCTACTTCAAACGATGTTC 1535

Qy       1545 GAACGTGCTCGACAAGATCATGGATGATGAAACTGATCCGGTTTCCCTCGGAAGAGACAC 1604

Db       1536 GCTTGATCACTTTATGGATACTGAGGACTTGAATCATCTTGCTAGCGTAGAAGAAGATAC 1595

Qy       1605 GTCCGCG---------GAGAAGAGGAAGAGGTTTCATGACCTGCAGGATGTTCTTCAGAA 1655

Db       1596 TCCTGAGAAACGGCTACAAAAGAAGCAAAGGTACATGGAACTACAAGAGACTCTGATGAA 1655

Qy       1656 GGCATTCCACGAGGACAAGGAGGAGAATGACAGGTC 1691

Db       1656 GACCTTTAGTGAGGACAAGGAGGAATGTGGAAAGTC 1691


RESULT 13
US-10-328-675A-71
; Sequence 71, Application US/10328675A
; Publication No. US20030159171A1
; GENERAL INFORMATION:
;  APPLICANT: Salmeron, John
;  APPLICANT:  Weislo, Laura
;  APPLICANT:  Willits, Michael
;  TITLE OF INVENTION: NOVEL PLANT GENES AND USES THEREOF
;  FILE REFERENCE: 30857USNPDIV1
;  CURRENT APPLICATION NUMBER: US/10/328,675A
;  CURRENT FILING DATE:  2002-12-23
;  PRIOR APPLICATION NUMBER: 09/519,232
;  PRIOR FILING DATE: 2000-03-06
;  PRIOR APPLICATION NUMBER: 60/219,338
;  PRIOR FILING DATE: 1999-03-09
;  NUMBER OF SEQ ID NOS: 74
;  SOFTWARE: PatentIn Ver. 2.1
; SEQ ID NO 71
;   LENGTH: 1818
;   TYPE: DNA
;   ORGANISM: Arabidopsis thaliana
;   FEATURE:
;   NAME/KEY: CDS
;   LOCATION: (13)..(1818)
;   OTHER INFORMATION: AtNMLc4-2 cDNA sequence
US-10-328-675A-71

  Query Match             18.6%;  Score 380.4;  DB 12;  Length 1818;
  Best Local Similarity   57.4%;  Pred. No. 9.4e-78;
  Matches  778;  Conservative    0;  Mismatches  551;  Indels   27;  Gaps    4;

Qy        351 CGGCGAGGAGGTGGAGGTCGGGTACGAGGCGCTGCGGCTGGTGCTCGACTACCTCTACAG 410

Db        363 CGCCAGAGATTACGAAGTCGGCTTTGACTCGGTTGTGGCGGTTTTGGCGTATGTTTACAG 422

Qy        411 CGGCCGCGTCGGCGACCTGCCCAAGGCGGCGTGCCTCTGCGTCGACGAGGACTGCGCCCA 470

Db        423 CGGCAGAGTGAGGTCCCCGCCGAAGGGAGCTTCTGCTTGCGTAGACGACGATTGTTGCCA 482

Qy        471 CGTCGGGTGCCACCCCGCCGTCGCGTTCATGGCGCAGGTCCTCTTCGCCGCCTCCACCTT 530

Db        483 CGTGGCTTGCCGGTCAAAGGTGGATTTCATGGTGGAGGTTCTTTATCTGTCTTTCGTTTT 542

Qy        531 CCAGGTCGCCGAGCTCACCAACCTCTTCCAGCGGCGTCTCCTTGATGTCCTTGATAAGGT 590

Db        543 CCAGATTCAAGAATTAGTTACTCTGTATGAGAGGCAGTTCTTGGAAATTGTAGACAAAGT 602

Qy        591 TGAAGTAGATAACCTTCTATTGATCTTATCTGTTGCCAACTTATGCAACAAATCTTGCAT 650

Db        603 TGTAGTCGAAGACATCTTGGTTATATTCAAGCTTGATACTCTATGTGGTACAACATACAA 662

Qy        651 GAAACTGCTTGAAAGATGCCTTGATATGGTAGTCCGGTCAAACCTTGACATGATTACTCT 710

Db        663 GAAGCTTTTGGATAGATGCATAGAAATTATCGTGAAGTCTGATATAGAACTAGTTAGTCT 722

Qy        711 TGAGAAGTCATTGCCTCCAGATGTTATCAAGCAGATTATTGATGCACGCCTAAGCCTCGG 770
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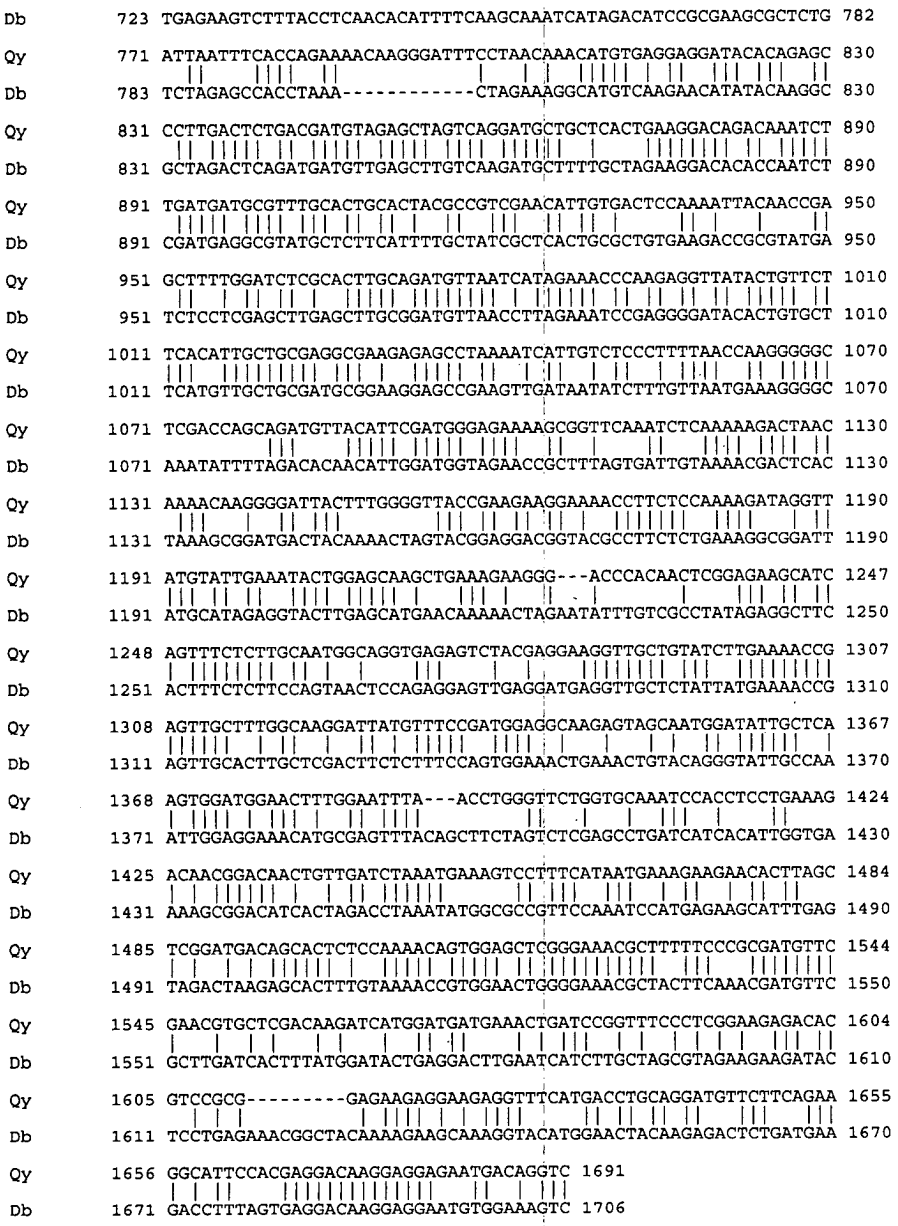
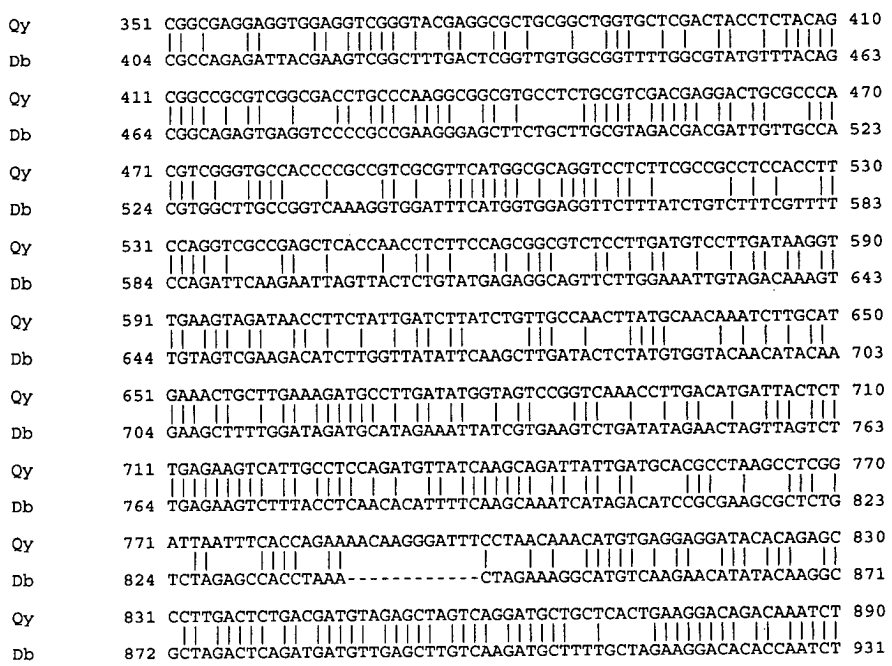


RESULT 14
US-09-934-455-433
; Sequence 433, Application US/09934455
; Publication No. US20030121070A1
; GENERAL INFORMATION:
; APPLICANT: Adam, Luc

; APPLICANT: Creelman, Robert
; APPLICANT: Dubell, Arnold
; APPLICANT: Heard, Jacqueline
; APPLICANT: Jiang, Cai-Zhong
; APPLICANT: Keddie, James
; APPLICANT: Pilgrim, Marsha
; APPLICANT: Ratcliffe, Oliver
; APPLICANT: Reuber, Lynne
; APPLICANT: Riechmann, Jose Luis
; APPLICANT: Yu, Guo-Liang
; APPLICANT: Pineda, Omaira
; TITLE OF INVENTION: Genes for Modifying Plant Traits IV
; FILE REFERENCE: MBI-0025
; CURRENT APPLICATION NUMBER: US/09/934,455
; CURRENT FILING DATE: 2001-08-22
; PRIOR APPLICATION NUMBER: 60/227439
; PRIOR FILING DATE: 2000-08-22
; PRIOR APPLICATION NUMBER: MBI-0022
; PRIOR FILING DATE: 2001-11-16
; PRIOR APPLICATION NUMBER: MBI-0023
; PRIOR FILING DATE: 2001-04-17
; NUMBER OF SEQ ID NOS: 516
; SOFTWARE: PatentIn version 3.1
; SEQ ID NO 433
; LENGTH: 2083
; TYPE: DNA
; ORGANISM: Arabidopsis thaliana
; FEATURE:
; NAME/KEY: CDS
; LOCATION: (54)..(1859)
; OTHER INFORMATION: G1290
US-09-934-455-433

Query Match 18.6%; Score 380.4; DB 11; Length 2083;
Best Local Similarity 57.4%; Pred. No. 9.9e-78;
Matches 778; Conservative 0; Mismatches 551; Indels 27; Gaps 4;



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Qy        891 TGATGATGCGTTTGCACTGCACTACGCCGTCGAACATTGTGACTCCAAAATTACAACCGA 950
Db        932 CGATGAGGCGTATGCTCTTCATTTGCTATCGCTCACTGCGCTGTGAAGACCGCGTATGA 991

Qy        951 GCTTTTGGATCTCGCACTTGCAGATGTTAATCATAGAAACCCAAGAGGTTATACTGTTCT 1010
Db        992 TCTCCTCGAGCTTGAGCTTGCGGATGTTAACCTTAGAAATCCGAGGGGATACACTGTGCT 1051

Qy       1011 TCACATTGCTGCGAGGCGAAGAGAGCCTAAAATCATTGTCTCCCTTTTAACCAAGGGGGC 1070
Db       1052 TCATGTTGCTGCGATGCGGAAGGAGCCGAAGTTGATAATATCTTTGTTAATGAAAGGGGC 1111

Qy       1071 TCGACCAGCAGATGTTACATTCGATGGGAGAAAAGCGGTTCAAATCTCAAAAAGACTAAC 1130
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; Sequence 45, Application US/10328675A
; Publication No. US20030159171A1
; GENERAL INFORMATION:
; APPLICANT: Salmeron, John
; APPLICANT: Weislo, Laura
; APPLICANT: Willits, Michael
; TITLE OF INVENTION: NOVEL PLANT GENES AND USES THEREOF
; FILE REFERENCE: 30857USNPDIV1
; CURRENT APPLICATION NUMBER: US/10/328,675A
; CURRENT FILING DATE: 2002-12-23
; PRIOR APPLICATION NUMBER: 09/519,232
; PRIOR FILING DATE: 2000-03-06
; PRIOR APPLICATION NUMBER: 60/219,338
; PRIOR FILING DATE: 1999-03-09
; NUMBER OF SEQ ID NOS: 74
; SOFTWARE: PatentIn Ver. 2.1
; SEQ ID NO 45
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;   TYPE: DNA
;   ORGANISM: Solanum tuberosum
;   FEATURE:
;   NAME/KEY: CDS
;   LOCATION: (1)..(651)
;   OTHER INFORMATION: Potato A
;   FEATURE:
;   NAME/KEY: Misc_Feature
;   LOCATION: (1)...(1)
;   OTHER INFORMATION: Xaa is either Glu or Asp
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GenCore version 5.1.6
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OM nucleic - nucleic search, using sw model

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Searched: 569978 seqs, 220691566 residues

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Listing first 45 summaries

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Pred. No. is the number of results predicted by chance to have a score greater than or equal to the score of the result being printed, and is derived by analysis of the total score distribution.

SUMMARIES

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1	590.2	28.9	1731	4	US-09-519-232-3	Sequence 3, Appli
2	563.4	27.6	1767	4	US-09-519-232-1	Sequence 1, Appli
3	562	27.5	2296	4	US-09-519-232-63	Sequence 63, Appl
4	420.6	20.6	2011	2	US-08-989-478-6	Sequence 6, Appli
5	420.6	20.6	2011	2	US-08-989-478-7	Sequence 7, Appli
6	420.6	20.6	2011	3	US-08-996-685-6	Sequence 6, Appli
7	420.6	20.6	2011	3	US-08-996-685-7	Sequence 7, Appli
8	411.8	20.2	1608	2	US-08-989-478-11	Sequence 11, Appl
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21	311.8	15.3	2154	4	US-09-551-778-1	Sequence 1, Appli
22	311.4	15.3	2673	4	US-09-519-232-73	Sequence 73, Appl
23	309.8	15.2	1830	4	US-09-569-804-6	Sequence 6, Appli
24	309.8	15.2	2120	4	US-09-569-804-8	Sequence 8, Appli
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26	306.2	15.0	2420	4	US-09-569-804-7	Sequence 7, Appli
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39	230.4	11.3	2235	4	US-09-569-804-20	Sequence 20, Appl
40	229	11.2	1725	4	US-09-519-232-69	Sequence 69, Appl
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42	198.2	9.7	498	4	US-09-519-232-57	Sequence 57, Appl
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44	193	9.5	706	4	US-09-569-804-9	Sequence 9, Appli
45	192.2	9.4	498	4	US-09-519-232-47	Sequence 47, Appl

ALIGNMENTS

RESULT 1
US-09-519-232-3
; Sequence 3, Application US/09519232
; Patent No. 6528702
; GENERAL INFORMATION:
; APPLICANT: Salmeron, John
; APPLICANT: Weislo, Laura
; APPLICANT: Willits, Michael
; APPLICANT: Mengiste, Tesfaye
; TITLE OF INVENTION: NOVEL PLANT GENES AND USES THEREOF
; FILE REFERENCE: S-30857A/RTP2095
; CURRENT APPLICATION NUMBER: US/09/519,232
; CURRENT FILING DATE: 2000-03-06
; NUMBER OF SEQ ID NOS: 74
; SOFTWARE: PatentIn Ver. 2.1
; SEQ ID NO 3
; LENGTH: 1731
; TYPE: DNA
; ORGANISM: Lycopersicon esculentum
; FEATURE:
; NAME/KEY: CDS
; LOCATION: (1)..(1728)
; OTHER INFORMATION: Full length tomato cDNA sequence
US-09-519-232-3

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Best Local Similarity 65.2%; Pred. No. 3.7e-118;
Matches 906; Conservative 0; Mismatches 468; Indels 15; Gaps 2;

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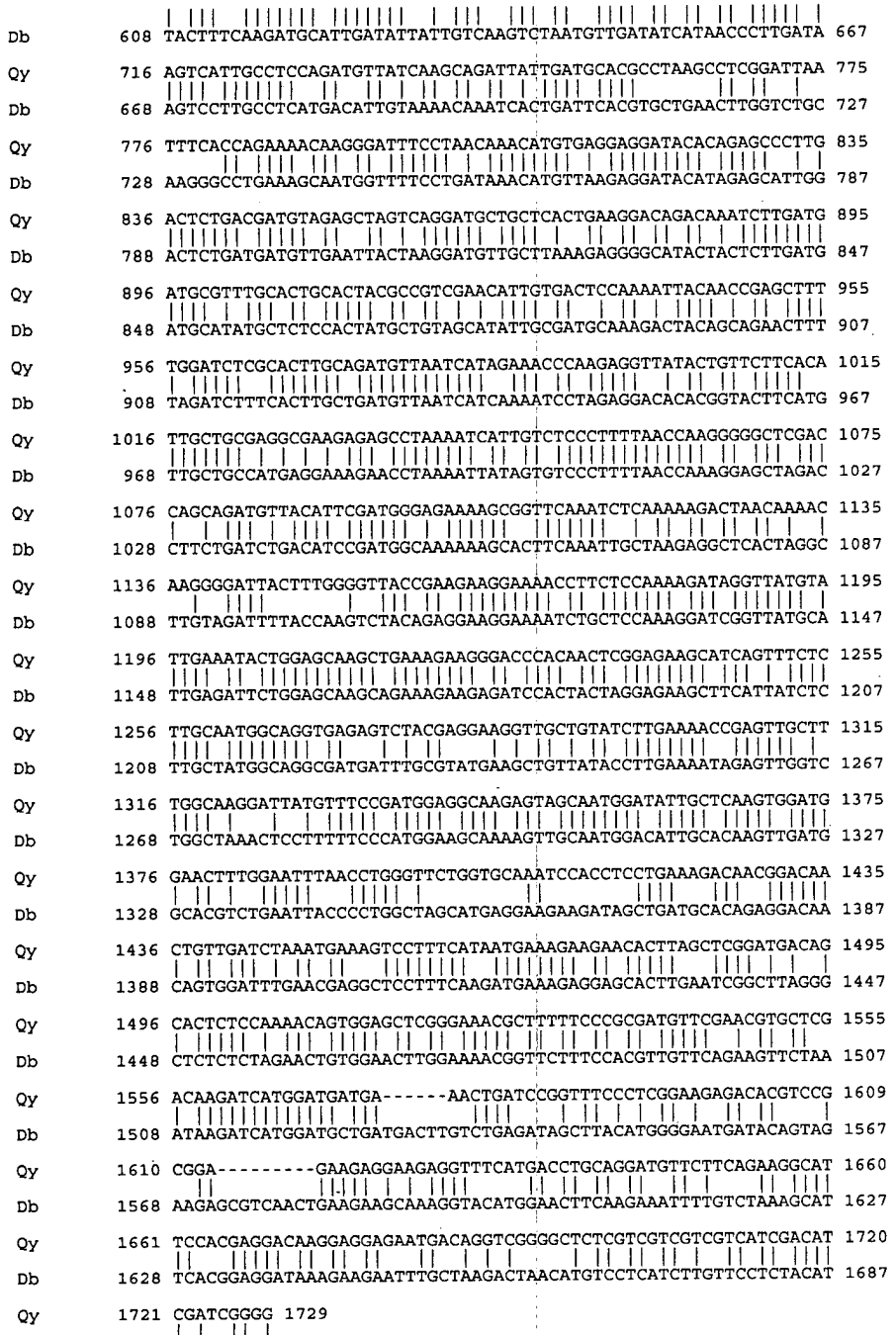

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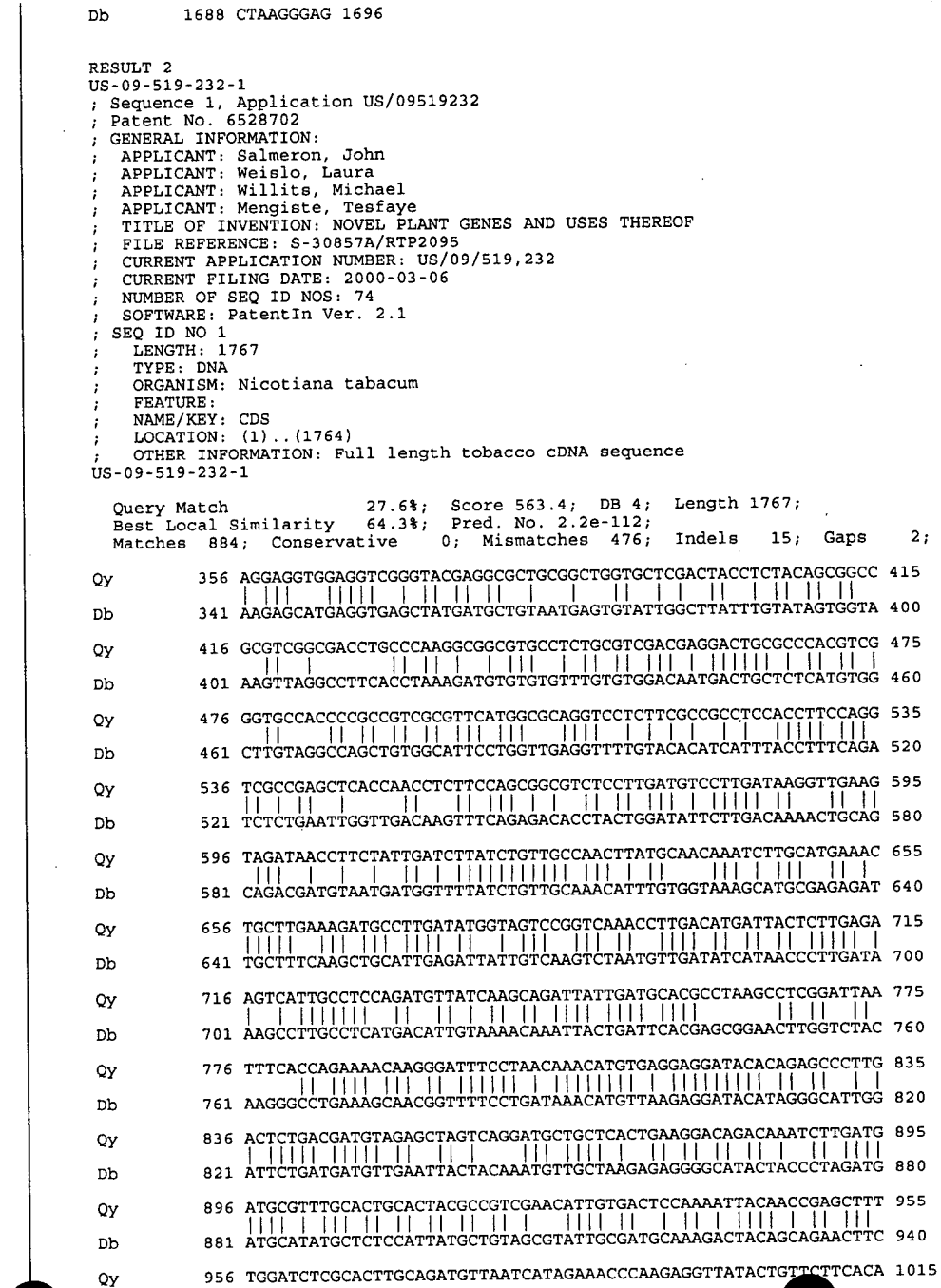

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; Sequence 1, Application US/09519232
; Patent No. 6528702
; GENERAL INFORMATION:
;  APPLICANT: Salmeron, John
;  APPLICANT: Weislo, Laura
;  APPLICANT: Willits, Michael
;  APPLICANT: Mengiste, Tesfaye
;  TITLE OF INVENTION: NOVEL PLANT GENES AND USES THEREOF
;  FILE REFERENCE: S-30857A/RTP2095
;  CURRENT APPLICATION NUMBER: US/09/519,232
;  CURRENT FILING DATE: 2000-03-06
;  NUMBER OF SEQ ID NOS: 74
;  SOFTWARE: PatentIn Ver. 2.1
; SEQ ID NO 1
;   LENGTH: 1767
;   TYPE: DNA
;   ORGANISM: Nicotiana tabacum
;   FEATURE:
;   NAME/KEY: CDS
;   LOCATION: (1)..(1764)
;   OTHER INFORMATION: Full length tobacco cDNA sequence
US-09-519-232-1

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Db       1541 ATAAGATCATGGATGCTGATGACTTGTCTGAGATAGCTTACATGGGGAATGATACGGCAG 1600

Qy       1610 CGGA---------GAAGAGGAAGAGGTTTCATGACCTGCAGGATGTTCTTCAGAAGGCAT 1660

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Db       1661 TCACTGAGGATAAAGAAGAATATGATAAGACTAACAACATCTCCTCATCTTGTTC 1715
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RESULT 3
US-09-519-232-63
; Sequence 63, Application US/09519232
; Patent No. 6528702
; GENERAL INFORMATION:
; APPLICANT: Salmeron, John
; APPLICANT: Weislo, Laura
; APPLICANT: Willits, Michael
; APPLICANT: Mengiste, Tesfaye
; TITLE OF INVENTION: NOVEL PLANT GENES AND USES THEREOF
; FILE REFERENCE: S-30857A/RTP2095
; CURRENT APPLICATION NUMBER: US/09/519,232
; CURRENT FILING DATE: 2000-03-06
; NUMBER OF SEQ ID NOS: 74
; SOFTWARE: PatentIn Ver. 2.1
; SEQ ID NO 63
; LENGTH: 2296
; TYPE: DNA
; ORGANISM: Beta vulgaris
; FEATURE:
; NAME/KEY: CDS
; LOCATION: (113)..(1927)
; OTHER INFORMATION: full-length Sugarbeet cDNA sequence
US-09-519-232-63

Query Match 27.5%; Score 562; DB 4; Length 2296;
Best Local Similarity 61.2%; Pred. No. 4.9e-112;
Matches 1014; Conservative 0; Mismatches 605; Indels 39; Gaps 5;

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Db        261 CCGACGCCGCCGCTCTTCTCCGCCTCTCTGAAAACCTCGACTCGCTTTTCCAACCCTCGC 320

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Qy        206 GCGACCTGCGGGTGCACCGCTGCGTGCTCTCCGCGCGGAGCCCCTTCCTGCGCGGCGTCT 265

Db        381 GTGAAGTCGCCGTTCATCGGTGTGTTCTCTCGTCTCGGAGCTCGTTCTTTCGGTCCGCTT 440

Qy        266 TCGCGCGCCGCGCCGCCGCCGCGCCGCGAGGCGGCGGCGGCGAGGATGGCAGCGAGAGGCTGG 325

Db        441 TTGCTT----------CGAAACGAGAGAAGGAGAAGGAGAGGGATAAAGAGAGAGTGGTG 490

Qy        326 AGCTCCGGGAGCTCCTCGGCGGCGGCGGCGAGGAGGTGGAGGTCGGGTACGAGGCGCTGC 385

Db        491 AAGCTTGAG-----CTTAAGGATTTAGCTGGTGATTTTGAGGTTGGATTTGATTCGGTTG 545

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Qy        626 CCAACTTATGCAACAAATCTTGCATGAAACTGCTTGAAAGATGCCTTGATATGGTAGTCC 685

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Db        906 TAATCGACACGCGAAAGGAACTTGGGTTTACTGAACCTGGGCGTGTTGAGTTTCCTGATA 965

Qy        806 AACATGTGAGGAGGATACACAGAGCCCTTGACTCTGACGATGTAGAGCTAGTCAGGATGC 865

Db        966 AGCATGTGAAGAGAATACACAGAGCTTTGGAATCCGATGATGTAGAGTTAGTCAGAATGC 1025

Qy        866 TGCTCACTGAAGGACAGACAAATCTTGATGATGCGTTTGCACTGCACTACGCCGTCGAAC 925

Db       1026 TTTTAAAAGAGCGCCATACAACTCTAGATGATGCATATGCCCTTCACTATGCTGTGGCAC 1085

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Qy        986 GAAACCCAAGAGGTTATACTGTTCTTCACATTGCTGCGAGGCGAAGAGAGCCTAAAATCA 1045

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Qy       1046 TTGTCTCCCTTTTAACCAAGGGGGCTCGACCAGCAGATGTTACATTCGATGGGAGAAAAG 1105
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Db       1206 TTGTATCCTTGTTAACCAAGGGAGCCCATCCGTCTGATATAACATCAGATGATAAAAAAG 1265

Qy       1106 CGGTTCAAATCTCAAAAAGACTAACAAAACAAGGGGATTACTTTGGGGTTACCGAAGAAG 1165

Db       1266 CACTGCAGATAGCAAAGAGACTAACAAAAGCTGTGGACTTCTATAAAACTACAGAACAAG 1325

Qy       1166 GAAAACCTTCTCCAAAAGATAGGTTATGTATTGAAATACTGGAGCAAGCTGAAAGAAGGG 1225

Db       1326 GAAAAGATGCACCAAAGGATCGGTTGTGCATTGAAATACTGGAGCAAGCTGAAAGAAGAG 1385

Qy       1226 ACCCACAACTCGGAGAAGCATCAGTTTCTCTTGCAATGGCAGGTGAGAGTCTACGAGGAA 1285

Db       1386 AACCATTGCTAGGAGAAGGTTCTGTTTCTCTTGCAAAGGCAGGAGATGATCTGCGTATGA 1445

Qy       1286 GGTTGCTGTATCTTGAAAACCGAGTTGCTTTGGCAAGGATTATGTTTCCGATGGAGGCAA 1345

Db       1446 AGCTATTATATCTTGAAAATAGAGTTGCACTTGCTCGGTTGCTCTTTCCAATGGAAGCGA 1505

Qy       1346 GAGTAGCAATGGATATTGCTCAAGTGGATGGAACTTTGGAATTTAACCTGGGTTCTGGTG 1405

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Qy       1406 CAAATCCACCTCCTGAAAGACAACGGACAACTGTTGATCTAAATGAAAGTCCTTTCATAA 1465

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Db       1617 TGAAAGAGGAGCATTTGCAGAGGATGAAAGCACTGTCTAAAACTGTTGAGCTTGGCAAGC 1676

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Qy       1691 CGGGGCTCTCGTCGTCGTCGTCATCGACATCGATCGGG 1728

Db       1857 CTACATTATCATCATCGTCGTCGTCGACTCCAATGGGG 1894


RESULT 4
US-08-989-478-6
; Sequence 6, Application US/08989478
; Patent No. 5986082
;  GENERAL INFORMATION:
;    APPLICANT:  Uknes, Scott
;    APPLICANT:  Hunt, Michelle
;    APPLICANT:  Steiner, Henry-York
;    APPLICANT:  Ryals, John
;    TITLE OF INVENTION:  ALTERED FORMS OF THE NIM1 GENE CONFERRING
;    TITLE OF INVENTION:  DISEASE RESISTANCE IN PLANTS
;    NUMBER OF SEQUENCES:  32
;    CORRESPONDENCE ADDRESS:
;      ADDRESSEE:  No. 5986082artis Corporation
;      STREET:  3054 Cornwallis Road
;      CITY:  Research Triangle Park
;      STATE:  No. 5986082th Carolina
;      COUNTRY:  USA
;      ZIP:  27709
;    COMPUTER READABLE FORM:
;      MEDIUM TYPE:  Floppy disk
;      COMPUTER:  IBM PC compatible
;      OPERATING SYSTEM:  PC-DOS/MS-DOS
;      SOFTWARE:  PatentIn Release #1.0, Version #1.30
;    CURRENT APPLICATION DATA:
;      APPLICATION NUMBER:  US/08/989,478
;      FILING DATE:
;      CLASSIFICATION:
;    PRIOR APPLICATION DATA:
;      APPLICATION NUMBER:  US 60/033,177
;      FILING DATE:  13-DEC-1996
;    PRIOR APPLICATION DATA:
;      APPLICATION NUMBER:  US 60/034,379
;      FILING DATE:  27-DEC-1996
;    PRIOR APPLICATION DATA:
;      APPLICATION NUMBER:  US 60/034,382
;      FILING DATE:  27-DEC-1996
;    PRIOR APPLICATION DATA:
;      APPLICATION NUMBER:  US 60/034,730
;      FILING DATE:  10-JAN-1997
;    PRIOR APPLICATION DATA:
;      APPLICATION NUMBER:  US 60/035,021
;      FILING DATE:  10-JAN-1997
;    PRIOR APPLICATION DATA:
;      APPLICATION NUMBER:  US 60/035,022
;      FILING DATE:  10-JAN-1997
;    ATTORNEY/AGENT INFORMATION:
;      NAME:  Meigs, J. Timothy
;      REGISTRATION NUMBER:  38,241
;      REFERENCE/DOCKET NUMBER:  PF/5-21214/P1/CGC1911
;    TELECOMMUNICATION INFORMATION:
;      TELEPHONE:  (919) 541-8587
;      TELEFAX:  (919) 541-8689
;  INFORMATION FOR SEQ ID NO:  6:
;    SEQUENCE CHARACTERISTICS:
;      LENGTH:  2011 base pairs
;      TYPE:  nucleic acid
;      STRANDEDNESS:  single
;      TOPOLOGY:  linear
;    MOLECULE TYPE:  cDNA
;    ORIGINAL SOURCE:
;      ORGANISM:  Arabidopsis thaliana
;    FEATURE:
;      NAME/KEY:  misc_feature
;      LOCATION:  1..2011
;      OTHER INFORMATION:  /note= "NIM1 cDNA sequence"
;    FEATURE:
;      NAME/KEY:  CDS
;      LOCATION:  43..1824
;      OTHER INFORMATION:  /product= "NIM1 protein"
US-08-989-478-6

  Query Match             20.6%;  Score 420.6;  DB 2;  Length 2011;
  Best Local Similarity   58.4%;  Pred. No. 1.4e-81;
  Matches  823;  Conservative    0;  Mismatches  557;  Indels   30;  Gaps    4;

Qy        352 GGCGAGGAGGTGGAGGTCGGGTACGAGGCGCTGCGGCTGGTGCTCGACTACCTCTACAGC 411

Db        394 GCCAAGGATTACGAAGTCGGTTTCGATTCGGTTGTGACTGTTTTGGCTTATGTTTACAGC 453

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Qy        652 AAACTGCTTGAAAGATGCCTTGATATGGTAGTCCGGTCAAACCTTGACATGATTACTCTT 711
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Db        694 AAGCTATTGGATAGATGTAAAGAGATTATTGTCAAGTCTAATGTAGATATGGTTAGTCTT 753

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Qy        952 CTTTTGGATCTCGCACTTGCAGATGTTAATCATAGAAACCCAAGAGGTTATACTGTTCTT 1011

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Qy       1012 CACATTGCTGCGAGGCGAAGAGAGCCTAAAATCATTGTCTCCCTTTTAACCAAGGGGGCT 1071

Db       1042 CATGTTGCTGCGATGCGGAAGGAGCCACAATTGATACTATCTCTATTGGAAAAAGGTGCA 1101

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Qy       1132 AAACAAGGGGATTACTTTGGGGTTACCGAAGAAGGAAAACCTTCTCCAAAAGATAGGTTA 1191

Db       1162 ATGGCGGTTGAATGTAATAATATCCCGGAGCAATGCAAGCATTCTCTCAAAGGCCGACTA 1221

Qy       1192 TGTATTGAAATACTGGAGCAAGCTGAAAGAAGGGACCCACAACTCGGAGAAGCATCAGTT 1251

Db       1222 TGTGTAGAAATACTAGAGCAAGAAGACAAACGAGAACAAATTCCTAGAGATGTTCCTCCC 1281

Qy       1252 TCTCTTGCAATGGCAGGTGAGAGTCTACGAGGAAGGTTGCTGTATCTTGAAAACCGAGTT 1311

Db       1282 TCTTTTGCAGTGGCGGCCGATGAATTGAAGATGACGCTGCTCGATCTTGAAAATAGAGTT 1341

Qy       1312 GCTTTGGCAAGGATTATGTTTCCGATGGAGGCAAGAGTAGCAATGGATATTGCTCAAGTG 1371

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Qy       1603 ACGTCCGCG---------GAGAAGAGGAAGAGGTTTCATGACCTGCAGGATGTTCTTCAG 1653

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Db       1762 TCCACATCGAAATCAACCGGTGGAAAGAGG 1791
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RESULT 5
US-08-989-478-7
; Sequence 7, Application US/08989478
; Patent No. 5986082
;  GENERAL INFORMATION:
;    APPLICANT:  Uknes, Scott
;    APPLICANT:  Hunt, Michelle
;    APPLICANT:  Steiner, Henry-York
;    APPLICANT:  Ryals, John
;    TITLE OF INVENTION:  ALTERED FORMS OF THE NIM1 GENE CONFERRING
;    TITLE OF INVENTION:  DISEASE RESISTANCE IN PLANTS
;    NUMBER OF SEQUENCES:  32
;    CORRESPONDENCE ADDRESS:
;      ADDRESSEE:  No. 5986082artis Corporation
;      STREET:  3054 Cornwallis Road
;      CITY:  Research Triangle Park
;      STATE:  No. 5986082th Carolina
;      COUNTRY:  USA
;      ZIP:  27709
;    COMPUTER READABLE FORM:
;      MEDIUM TYPE:  Floppy disk
;      COMPUTER:  IBM PC compatible
;      OPERATING SYSTEM:  PC-DOS/MS-DOS
;      SOFTWARE:  PatentIn Release #1.0, Version #1.30
;    CURRENT APPLICATION DATA:
;      APPLICATION NUMBER:  US/08/989,478
;      FILING DATE:
;      CLASSIFICATION:
;    PRIOR APPLICATION DATA:
;      APPLICATION NUMBER:  US 60/033,177
;      FILING DATE:  13-DEC-1996
;    PRIOR APPLICATION DATA:
;      APPLICATION NUMBER:  US 60/034,379
;      FILING DATE:  27-DEC-1996
;    PRIOR APPLICATION DATA:
;      APPLICATION NUMBER:  US 60/034,382
;      FILING DATE:  27-DEC-1996
;    PRIOR APPLICATION DATA:
;      APPLICATION NUMBER:  US 60/034,730
;      FILING DATE:  10-JAN-1997
;    PRIOR APPLICATION DATA:
;      APPLICATION NUMBER:  US 60/035,021
;      FILING DATE:  10-JAN-1997
;    PRIOR APPLICATION DATA:
;      APPLICATION NUMBER:  US 60/035,022
;      FILING DATE:  10-JAN-1997
;    ATTORNEY/AGENT INFORMATION:
;      NAME:  Meigs, J. Timothy
;      REGISTRATION NUMBER:  38,241
;      REFERENCE/DOCKET NUMBER:  PF/5-21214/P1/CGC1911
;    TELECOMMUNICATION INFORMATION:
;      TELEPHONE:  (919) 541-8587
;      TELEFAX:  (919) 541-8689
;  INFORMATION FOR SEQ ID NO:  7:
;    SEQUENCE CHARACTERISTICS:
;      LENGTH:  2011 base pairs
;      TYPE:  nucleic acid
;      STRANDEDNESS:  single
;      TOPOLOGY:  linear
;    MOLECULE TYPE:  cDNA
;    FEATURE:
;      NAME/KEY:  CDS
;      LOCATION:  43..1824
;      OTHER INFORMATION:  /product= "altered form of NIM1"
;      OTHER INFORMATION:  /note= "Serine residues at amino acid positions 55 and 59 in
;      OTHER INFORMATION:  wild-type NIM1 gene product have been changed to Alanine
;      OTHER INFORMATION:  residues."
;    FEATURE:
;      NAME/KEY:  misc_feature
;      LOCATION:  205..217
;      OTHER INFORMATION:  /note= "nucleotides 205 and 217
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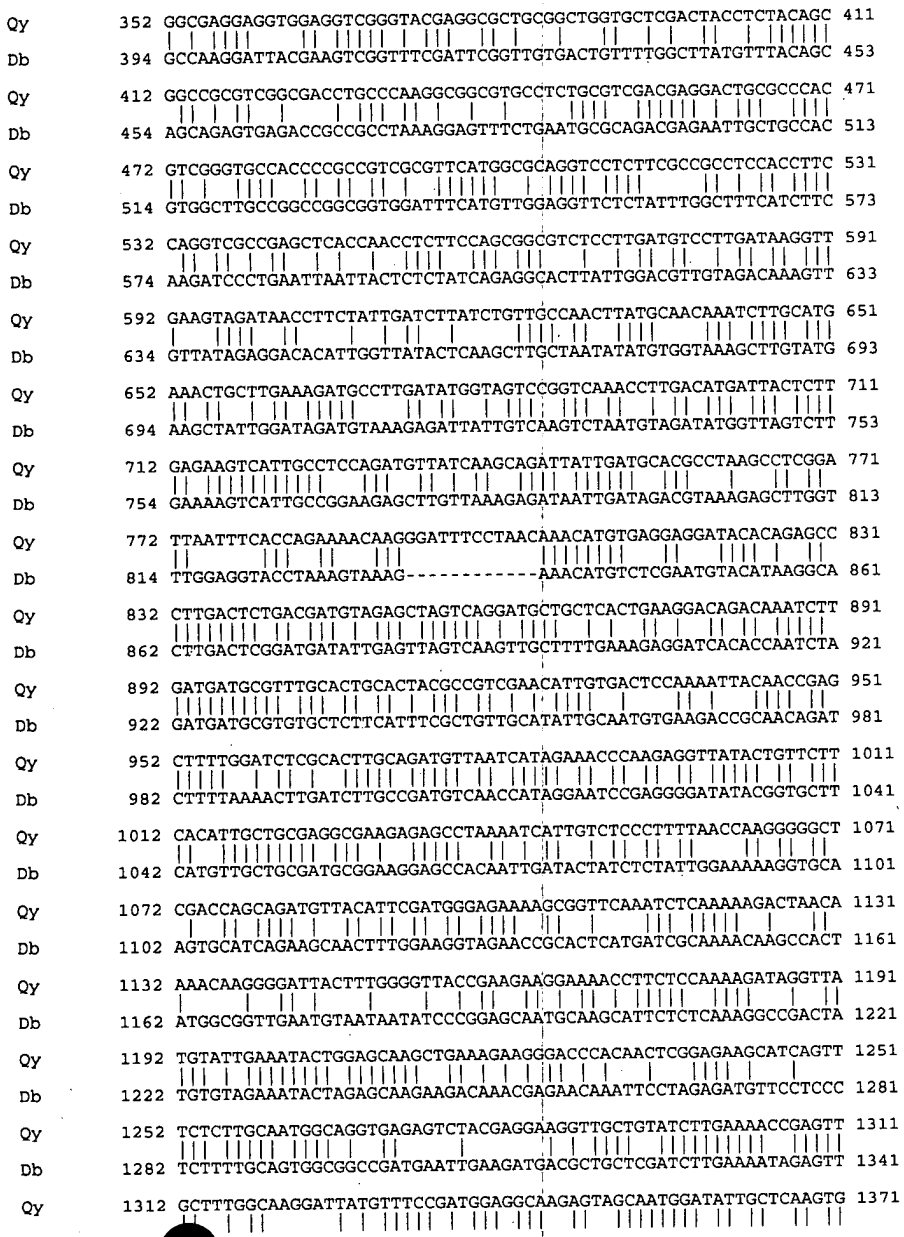
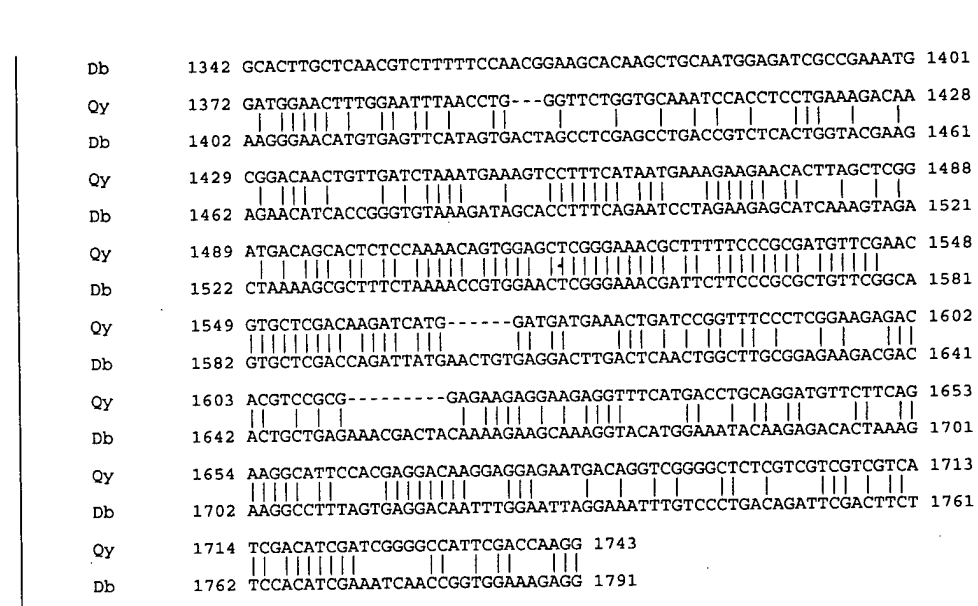
; OTHER INFORMATION: changed from T's to G's compared to wild-type sequence."
US-08-989-478-7

Query Match 20.6%; Score 420.6; DB 2; Length 2011;
Best Local Similarity 58.4%; Pred. No. 1.4e-81;
Matches 823; Conservative 0; Mismatches 557; Indels 30; Gaps 4;





RESULT 6
US-08-996-685-6
; Sequence 6, Application US/08996685
; Patent No. 6031153
; GENERAL INFORMATION:
; APPLICANT: Ryals, John
; APPLICANT: Friedrich, Leslie
; APPLICANT: Uknes, Scott
; APPLICANT: Molina, Antonio
; APPLICANT: Ruess, Wilhelm
; APPLICANT: Knauf-Beiter, Gertrude
; APPLICANT: Kung, Ruth
; APPLICANT: Kessmann, Helmut
; APPLICANT: Oostendorp, Michael
; TITLE OF INVENTION: METHOD FOR PROTECTING PLANTS
; NUMBER OF SEQUENCES: 32
; CORRESPONDENCE ADDRESS:
; ADDRESSEE: No. 6031153artis Corporation
; STREET: 3054 Cornwallis Road
; CITY: Research Triangle Park
; STATE: No. 6031153th Carolina
; COUNTRY: USA
; ZIP: 27709
; COMPUTER READABLE FORM:
; MEDIUM TYPE: Floppy disk
; COMPUTER: IBM PC compatible
; OPERATING SYSTEM: PC-DOS/MS-DOS
; SOFTWARE: PatentIn Release #1.0, Version #1.30
; CURRENT APPLICATION DATA:
; APPLICATION NUMBER: US/08/996,685
; FILING DATE:
; CLASSIFICATION:
; PRIOR APPLICATION DATA:
; APPLICATION NUMBER: US 08/761,543
; FILING DATE: 6-DEC-1996
; PRIOR APPLICATION DATA:
; APPLICATION NUMBER: US 60/034,378
; FILING DATE: 27-DEC-1996
; PRIOR APPLICATION DATA:
; APPLICATION NUMBER: US 60/034,379
; FILING DATE: 27-DEC-1996
; PRIOR APPLICATION DATA:

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;      APPLICATION NUMBER:  US 60/034,382
;      FILING DATE:  27-DEC-1996
;    PRIOR APPLICATION DATA:
;      APPLICATION NUMBER:  US 60/034,730
;      FILING DATE:  10-JAN-1997
;    PRIOR APPLICATION DATA:
;      APPLICATION NUMBER:  US 60/035,021
;      FILING DATE:  10-JAN-1997
;    PRIOR APPLICATION DATA:
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;      FILING DATE:  10-JAN-1997
;    PRIOR APPLICATION DATA:
;      APPLICATION NUMBER:  US 60/035,024
;      FILING DATE:  10-JAN-1997
;    PRIOR APPLICATION DATA:
;      APPLICATION NUMBER:  US 08/875,015
;      FILING DATE:  16-JUL-1997
;    ATTORNEY/AGENT INFORMATION:
;      NAME:  Meigs, J. Timothy
;      REGISTRATION NUMBER:  38,241
;      REFERENCE/DOCKET NUMBER:  PF/5-21215/P1/CGC1912
;    TELECOMMUNICATION INFORMATION:
;      TELEPHONE:  (919) 541-8587
;      TELEFAX:  (919) 541-8689
;  INFORMATION FOR SEQ ID NO:  6:
;    SEQUENCE CHARACTERISTICS:
;      LENGTH:  2011 base pairs
;      TYPE:  nucleic acid
;      STRANDEDNESS:  single
;      TOPOLOGY:  linear
;    MOLECULE TYPE:  cDNA
;    ORIGINAL SOURCE:
;      ORGANISM:  Arabidopsis thaliana
;    FEATURE:
;      NAME/KEY:  misc_feature
;      LOCATION:  1..2011
;      OTHER INFORMATION:  /note= "NIM1 cDNA sequence"
;    FEATURE:
;      NAME/KEY:  CDS
;      LOCATION:  43..1824
;      OTHER INFORMATION:  /product= "NIM1 protein"
US-08-996-685-6

  Query Match             20.6%;  Score 420.6;  DB 3;  Length 2011;
  Best Local Similarity   58.4%;  Pred. No. 1.4e-81;
  Matches  823;  Conservative    0;  Mismatches  557;  Indels   30;  Gaps    4;

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Qy        412 GGCCGCGTCGGCGACCTGCCCAAGGCGGCGTGCCTCTGCGTCGACGAGGACTGCGCCCAC 471
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Qy        532 CAGGTCGCCGAGCTCACCAACCTCTTCCAGCGGCGTCTCCTTGATGTCCTTGATAAGGTT 591
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Qy        592 GAAGTAGATAACCTTCTATTGATCTTATCTGTTGCCAACTTATGCAACAAATCTTGCATG 651
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Qy        652 AAACTGCTTGAAAGATGCCTTGATATGGTAGTCCGGTCAAACCTTGACATGATTACTCTT 711
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Qy        712 GAGAAGTCATTGCCTCCAGATGTTATCAAGCAGATTATTGATGCACGCCTAAGCCTCGGA 771
Db        754 GAAAAGTCATTGCCGGAAGAGCTTGTTAAAGAGATAATTGATAGACGTAAAGAGCTTGGT 813

Qy        772 TTAATTTCACCAGAAAACAAGGGATTTCCTAACAAACATGTGAGGAGGATACACAGAGCC 831
Db        814 TTGGAGGTACCTAAAGTAAAG------------AAACATGTCTCGAATGTACATAAGGCA 861

Qy        832 CTTGACTCTGACGATGTAGAGCTAGTCAGGATGCTGCTCACTGAAGGACAGACAAATCTT 891
Db        862 CTTGACTCGGATGATATTGAGTTAGTCAAGTTGCTTTTGAAAGAGGATCACACCAATCTA 921

Qy        892 GATGATGCGTTTGCACTGCACTACGCCGTCGAACATTGTGACTCCAAAATTACAACCGAG 951
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Qy        952 CTTTTGGATCTCGCACTTGCAGATGTTAATCATAGAAACCCAAGAGGTTATACTGTTCTT 1011
Db        982 CTTTTAAAACTTGATCTTGCCGATGTCAACCATAGGAATCCGAGGGGATATACGGTGCTT 1041

Qy       1012 CACATTGCTGCGAGGCGAAGAGAGCCTAAAATCATTGTCTCCCTTTTAACCAAGGGGGCT 1071
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Qy       1072 CGACCAGCAGATGTTACATTCGATGGGAGAAAAGCGGTTCAAATCTCAAAAAGACTAACA 1131
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Qy       1192 TGTATTGAAATACTGGAGCAAGCTGAAAGAAGGGACCCACAACTCGGAGAAGCATCAGTT 1251
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Qy       1312 GCTTTGGCAAGGATTATGTTTCCGATGGAGGCAAGAGTAGCAATGGATATTGCTCAAGTG 1371
Db       1342 GCACTTGCTCAACGTCTTTTTCCAACGGAAGCACAAGCTGCAATGGAGATCGCCGAAATG 1401

Qy       1372 GATGGAACTTTGGAATTTAACCTG---GGTTCTGGTGCAAATCCACCTCCTGAAAGACAA 1428
Db       1402 AAGGGAACATGTGAGTTCATAGTGACTAGCCTCGAGCCTGACCGTCTCACTGGTACGAAG 1461

Qy       1429 CGGACAACTGTTGATCTAAATGAAAGTCCTTTCATAATGAAAGAAGAACACTTAGCTCGG 1488
Db       1462 AGAACATCACCGGGTGTAAAGATAGCACCTTTCAGAATCCTAGAAGAGCATCAAAGTAGA 1521

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Qy       1603 ACGTCCGCG---------GAGAAGAGGAAGAGGTTTCATGACCTGCAGGATGTTCTTCAG 1653
Db       1642 ACTGCTGAGAAACGACTACAAAAGAAGCAAAGGTACATGGAAATACAAGAGACACTAAAG 1701

Qy       1654 AAGGCATTCCACGAGGACAAGGAGGAGAATGACAGGTCGGGGCTCTCGTCGTCGTCGTCA 1713
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RESULT 7
US-08-996-685-7
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; Sequence 7, Application US/08996685
; Patent No. 6031153
;  GENERAL INFORMATION:
;    APPLICANT:  Ryals, John
;    APPLICANT:  Friedrich, Leslie
;    APPLICANT:  Uknes, Scott
;    APPLICANT:  Molina, Antonio
;    APPLICANT:  Ruess, Wilhelm
;    APPLICANT:  Knauf-Beiter, Gertrude
;    APPLICANT:  Kung, Ruth
;    APPLICANT:  Kessmann, Helmut
;    APPLICANT:  Oostendorp, Michael
;    TITLE OF INVENTION:  METHOD FOR PROTECTING PLANTS
;    NUMBER OF SEQUENCES:  32
;    CORRESPONDENCE ADDRESS:
;      ADDRESSEE:  No. 6031153artis Corporation
;      STREET:  3054 Cornwallis Road
;      CITY:  Research Triangle Park
;      STATE:  No. 6031153th Carolina
;      COUNTRY:  USA
;      ZIP:  27709
;    COMPUTER READABLE FORM:
;      MEDIUM TYPE:  Floppy disk
;      COMPUTER:  IBM PC compatible
;      OPERATING SYSTEM:  PC-DOS/MS-DOS
;      SOFTWARE:  PatentIn Release #1.0, Version #1.30
;    CURRENT APPLICATION DATA:
;      APPLICATION NUMBER:  US/08/996,685
;      FILING DATE:
;      CLASSIFICATION:
;    PRIOR APPLICATION DATA:
;      APPLICATION NUMBER:  US 08/761,543
;      FILING DATE:  6-DEC-1996
;    PRIOR APPLICATION DATA:
;      APPLICATION NUMBER:  US 60/034,378
;      FILING DATE:  27-DEC-1996
;    PRIOR APPLICATION DATA:
;      APPLICATION NUMBER:  US 60/034,379
;      FILING DATE:  27-DEC-1996
;    PRIOR APPLICATION DATA:
;      APPLICATION NUMBER:  US 60/034,382
;      FILING DATE:  27-DEC-1996
;    PRIOR APPLICATION DATA:
;      APPLICATION NUMBER:  US 60/034,730
;      FILING DATE:  10-JAN-1997
;    PRIOR APPLICATION DATA:
;      APPLICATION NUMBER:  US 60/035,021
;      FILING DATE:  10-JAN-1997
;    PRIOR APPLICATION DATA:
;      APPLICATION NUMBER:  US 60/035,022
;      FILING DATE:  10-JAN-1997
;    PRIOR APPLICATION DATA:
;      APPLICATION NUMBER:  US 60/035,024
;      FILING DATE:  10-JAN-1997
;    PRIOR APPLICATION DATA:
;      APPLICATION NUMBER:  US 08/875,015
;      FILING DATE:  16-JUL-1997
;    ATTORNEY/AGENT INFORMATION:
;      NAME:  Meigs, J. Timothy
;      REGISTRATION NUMBER:  38,241
;      REFERENCE/DOCKET NUMBER:  PF/5-21215/P1/CGC1912
;    TELECOMMUNICATION INFORMATION:
;      TELEPHONE:  (919) 541-8587
;      TELEFAX:  (919) 541-8689
;  INFORMATION FOR SEQ ID NO:  7:
;    SEQUENCE CHARACTERISTICS:
;      LENGTH:  2011 base pairs
;      TYPE:  nucleic acid
;      STRANDEDNESS:  single
;      TOPOLOGY:  linear
;    MOLECULE TYPE:  cDNA
;    FEATURE:
;      NAME/KEY:  CDS
;      LOCATION:  43..1824
;      OTHER INFORMATION:  /product= "altered form of NIM1"
;      OTHER INFORMATION:  /note= "Serine residues at amino acid positions 55 and 59 in
;      OTHER INFORMATION:  wild-type NIM1 gene product have been changed to Alanine
;      OTHER INFORMATION:  residues."
;    FEATURE:
;      NAME/KEY:  misc_feature
;      LOCATION:  205..217
;      OTHER INFORMATION:  /note= "nucleotides 205 and 217
;      OTHER INFORMATION:  changed from T's to G's compared to wild-type sequence."
US-08-996-685-7

  Query Match             20.6%;  Score 420.6;  DB 3;  Length 2011;
  Best Local Similarity   58.4%;  Pred. No. 1.4e-81;
  Matches  823;  Conservative    0;  Mismatches  557;  Indels   30;  Gaps    4;

Qy        352 GGCGAGGAGGTGGAGGTCGGGTACGAGGCGCTGCGGCTGGTGCTCGACTACCTCTACAGC 411
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Qy        412 GGCCGCGTCGGCGACCTGCCCAAGGCGGCGTGCCTCTGCGTCGACGAGGACTGCGCCCAC 471
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Qy        472 GTCGGGTGCCACCCCGCCGTCGCGTTCATGGCGCAGGTCCTCTTCGCCGCCTCCACCTTC 531
              || |  ||||  || || || |  ||||||  | |||| ||||     || | || ||||
Db        514 GTGGCTTGCCGGCCGGCGGTGGATTTCATGTTGGAGGTTCTCTATTTGGCTTTCATCTTC 573

Qy        532 CAGGTCGCCGAGCTCACCAACCTCTTCCAGCGGCGTCTCCTTGATGTCCTTGATAAGGTT 591
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Db        634 GTTATAGAGGACACATTGGTTATACTCAAGCTTGCTAATATATGTGGTAAAGCTTGTATG 693

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Db        694 AAGCTATTGGATAGATGTAAAGAGATTATTGTCAAGTCTAATGTAGATATGGTTAGTCTT 753

Qy        712 GAGAAGTCATTGCCTCCAGATGTTATCAAGCAGATTATTGATGCACGCCTAAGCCTCGGA 771
              || |||||||||||    |||  || | ||  |||| ||||||  |||   |   || ||
Db        754 GAAAAGTCATTGCCGGAAGAGCTTGTTAAAGAGATAATTGATAGACGTAAAGAGCTTGGT 813

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              ||       |||  ||   |||                ||||||||   ||   |||| |  ||
Db        814 TTGGAGGTACCTAAAGTAAAG-----------AAACATGTCTCGAATGTACATAAGGCA 861

Qy        832 CTTGACTCTGACGATGTAGAGCTAGTCAGGATGCTGCTCACTGAAGGACAGACAAATCTT 891
              |||||||| || ||| | ||| |||||| | ||||  | |  || |  || || |||||
Db        862 CTTGACTCGGATGATATTGAGTTAGTCAAGTTGCTTTTGAAAGAGGATCACACCAATCTA 921

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              |||||||||| ||| || || | ||| || | | ||||  |    || |   |||| ||
Db        922 GATGATGCGTGTGCTCTTCATTTCGCTGTTGCATATTGCAATGTGAAGACCGCAACAGAT 981

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Db       1042 CATGTTGCTGCGATGCGGAAGGAGCCACAATTGATACTATCTCTATTGGAAAAAGGTGCA 1101

Qy       1072 CGACCAGCAGATGTTACATTCGATGGGAGAAAAGCGGTTCAAATCTCAAAAAGACTAACA 1131
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Db       1102 AGTGCATCAGAAGCAACTTTGGAAGGTAGAACCGCACTCATGATCGCAAAACAAGCCACT 1161

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Db       1162 ATGGCGGTTGAATGTAATAATATCCCGGAGCAATGCAAGCATTCTCTCAAAGGCCGACTA 1221

Qy       1192 TGTATTGAAATACTGGAGCAAGCTGAAAGAAGGGACCCACAACTCGGAGAAGCATCAGTT 1251
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Db       1222 TGTGTAGAAATACTAGAGCAAGAAGACAAACGAGAACAAATTCCTAGAGATGTTCCTCCC 1281

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Qy       1429 CGGACAACTGTTGATCTAAATGAAAGTCCTTTCATAATGAAAGAAGAACACTTAGCTCGG 1488

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RESULT 8
US-08-989-478-11
; Sequence 11, Application US/08989478
; Patent No. 5986082
;  GENERAL INFORMATION:
;    APPLICANT:  Uknes, Scott
;    APPLICANT:  Hunt, Michelle
;    APPLICANT:  Steiner, Henry-York
;    APPLICANT:  Ryals, John
;    TITLE OF INVENTION:  ALTERED FORMS OF THE NIM1 GENE CONFERRING
;    TITLE OF INVENTION:  DISEASE RESISTANCE IN PLANTS
;    NUMBER OF SEQUENCES:  32
;    CORRESPONDENCE ADDRESS:
;      ADDRESSEE:  No. 5986082artis Corporation
;      STREET:  3054 Cornwallis Road
;      CITY:  Research Triangle Park
;      STATE:  No. 5986082th Carolina
;      COUNTRY:  USA
;      ZIP:  27709
;    COMPUTER READABLE FORM:
;      MEDIUM TYPE:  Floppy disk
;      COMPUTER:  IBM PC compatible
;      OPERATING SYSTEM:  PC-DOS/MS-DOS
;      SOFTWARE:  PatentIn Release #1.0, Version #1.30
;    CURRENT APPLICATION DATA:
;      APPLICATION NUMBER:  US/08/989,478
;      FILING DATE:
;      CLASSIFICATION:
;    PRIOR APPLICATION DATA:
;      APPLICATION NUMBER:  US 60/033,177
;      FILING DATE:  13-DEC-1996
;    PRIOR APPLICATION DATA:
;      APPLICATION NUMBER:  US 60/034,379
;      FILING DATE:  27-DEC-1996
;    PRIOR APPLICATION DATA:
;      APPLICATION NUMBER:  US 60/034,382
;      FILING DATE:  27-DEC-1996
;    PRIOR APPLICATION DATA:
;      APPLICATION NUMBER:  US 60/034,730
;      FILING DATE:  10-JAN-1997
;    PRIOR APPLICATION DATA:
;      APPLICATION NUMBER:  US 60/035,021
;      FILING DATE:  10-JAN-1997
;    PRIOR APPLICATION DATA:
;      APPLICATION NUMBER:  US 60/035,022
;      FILING DATE:  10-JAN-1997
;    ATTORNEY/AGENT INFORMATION:
;      NAME:  Meigs, J. Timothy
;      REGISTRATION NUMBER:  38,241
;      REFERENCE/DOCKET NUMBER:  PF/5-21214/P1/CGC1911
;    TELECOMMUNICATION INFORMATION:
;      TELEPHONE:  (919) 541-8587
;      TELEFAX:  (919) 541-8689
;  INFORMATION FOR SEQ ID NO:  11:
;    SEQUENCE CHARACTERISTICS:
;      LENGTH:  1608 base pairs
;      TYPE:  nucleic acid
;      STRANDEDNESS:  single
;      TOPOLOGY:  linear
;    MOLECULE TYPE:  cDNA
;    FEATURE:
;      NAME/KEY:  CDS
;      LOCATION:  43..1608
;      OTHER INFORMATION:  /product= "Altered form of NIM1"
;      OTHER INFORMATION:  /note= "C-terminal deletion compared to wild-type NIM1."
US-08-989-478-11

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  Matches  730;  Conservative    0;  Mismatches  475;  Indels   15;  Gaps    2;

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Qy        532 CAGGTCGCCGAGCTCACCAACCTCTTCCAGCGGCGTCTCCTTGATGTCCTTGATAAGGTT 591

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Qy        652 AAACTGCTTGAAAGATGCCTTGATATGGTAGTCCGGTCAAACCTTGACATGATTACTCTT 711

Db        694 AAGCTATTGGATAGATGTAAAGAGATTATTGTCAAGTCTAATGTAGATATGGTTAGTCTT 753

Qy        712 GAGAAGTCATTGCCTCCAGATGTTATCAAGCAGATTATTGATGCACGCCTAAGCCTCGGA 771

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Db        862 CTTGACTCGGATGATATTGAGTTAGTCAAGTTGCTTTTGAAAGAGGATCACACCAATCTA 921
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Qy        892 GATGATGCGTTTGCACTGCACTACGCCGTCGAACATTGTGACTCCAAAATTACAACCGAG 951
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Db        922 GATGATGCGTGTGCTCTTCATTTCGCTGTTGCATATTGCAATGTGAAGACCGCAACAGAT 981

Qy        952 CTTTTGGATCTCGCACTTGCAGATGTTAATCATAGAAACCCAAGAGGTTATACTGTTCTT 1011
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Db        982 CTTTTAAAACTTGATCTTGCCGATGTCAACCATAGGAATCCGAGGGGATATACGGTGCTT 1041

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Qy       1072 CGACCAGCAGATGTTACATTCGATGGGAGAAAAGCGGTTCAAATCTCAAAAAGACTAACA 1131
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Db       1462 AGAACATCACCGGGTGTAAAGATAGCACCTTTCAGAATCCTAGAAGAGCATCAAAGTAGA 1521

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Db       1522 CTAAAAGCGCTTTCTAAAACCGTGGAACTCGGGAAACGATTCTTCCCGCGCTGTTCGGCA 1581

Qy       1549 GTGCTCGACAAGATCATGGA 1568
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Db       1582 GTGCTCGACCAGATTATGAA 1601


RESULT 9
US-08-996-685-11
; Sequence 11, Application US/08996685
; Patent No. 6031153
;  GENERAL INFORMATION:
;    APPLICANT:  Ryals, John
;    APPLICANT:  Friedrich, Leslie
;    APPLICANT:  Uknes, Scott
;    APPLICANT:  Molina, Antonio
;    APPLICANT:  Ruess, Wilhelm
;    APPLICANT:  Knauf-Beiter, Gertrude
;    APPLICANT:  Kung, Ruth
;    APPLICANT:  Kessmann, Helmut
;    APPLICANT:  Oostendorp, Michael
;    TITLE OF INVENTION:  METHOD FOR PROTECTING PLANTS
;    NUMBER OF SEQUENCES:  32
;    CORRESPONDENCE ADDRESS:
;      ADDRESSEE:  No. 6031153artis Corporation
;      STREET:  3054 Cornwallis Road
;      CITY:  Research Triangle Park
;      STATE:  No. 6031153th Carolina
;      COUNTRY:  USA
;      ZIP:  27709
;    COMPUTER READABLE FORM:
;      MEDIUM TYPE:  Floppy disk
;      COMPUTER:  IBM PC compatible
;      OPERATING SYSTEM:  PC-DOS/MS-DOS
;      SOFTWARE:  PatentIn Release #1.0, Version #1.30
;    CURRENT APPLICATION DATA:
;      APPLICATION NUMBER:  US/08/996,685
;      FILING DATE:
;      CLASSIFICATION:
;    PRIOR APPLICATION DATA:
;      APPLICATION NUMBER:  US 08/761,543
;      FILING DATE:  6-DEC-1996
;    PRIOR APPLICATION DATA:
;      APPLICATION NUMBER:  US 60/034,378
;      FILING DATE:  27-DEC-1996
;    PRIOR APPLICATION DATA:
;      APPLICATION NUMBER:  US 60/034,379
;      FILING DATE:  27-DEC-1996
;    PRIOR APPLICATION DATA:
;      APPLICATION NUMBER:  US 60/034,382
;      FILING DATE:  27-DEC-1996
;    PRIOR APPLICATION DATA:
;      APPLICATION NUMBER:  US 60/034,730
;      FILING DATE:  10-JAN-1997
;    PRIOR APPLICATION DATA:
;      APPLICATION NUMBER:  US 60/035,021
;      FILING DATE:  10-JAN-1997
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;      APPLICATION NUMBER:  US 60/035,022
;      FILING DATE:  10-JAN-1997
;    PRIOR APPLICATION DATA:
;      APPLICATION NUMBER:  US 60/035,024
;      FILING DATE:  10-JAN-1997
;    PRIOR APPLICATION DATA:
;      APPLICATION NUMBER:  US 08/875,015
;      FILING DATE:  16-JUL-1997
;    ATTORNEY/AGENT INFORMATION:
;      NAME:  Meigs, J. Timothy
;      REGISTRATION NUMBER:  38,241
;      REFERENCE/DOCKET NUMBER:  PF/5-21215/P1/CGC1912
;    TELECOMMUNICATION INFORMATION:
;      TELEPHONE:  (919) 541-8587
;      TELEFAX:  (919) 541-8689
;  INFORMATION FOR SEQ ID NO:  11:
;    SEQUENCE CHARACTERISTICS:
;      LENGTH:  1608 base pairs
;      TYPE:  nucleic acid
;      STRANDEDNESS:  single
;      TOPOLOGY:  linear
;    MOLECULE TYPE:  cDNA
;    FEATURE:
;      NAME/KEY:  CDS
;      LOCATION:  43..1608
;      OTHER INFORMATION:  /product= "Altered form of NIM1"
;      OTHER INFORMATION:  /note= "C-terminal deletion compared to wild-type NIM1."
US-08-996-685-11

  Query Match             20.2%;  Score 411.8;  DB 3;  Length 1608;
  Best Local Similarity   59.8%;  Pred. No. 1e-79;
  Matches  730;  Conservative    0;  Mismatches  475;  Indels   15;  Gaps    2;

Qy        352 GGCGAGGAGGTGGAGGTCGGGTACGAGGCGCTGCGGCTGGTGCTCGACTACCTCTACAGC 411
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Db        394 GCCAAGGATTACGAAGTCGGTTTCGATTCGGTTGTGACTGTTTTGGCTTATGTTTACAGC 453

Qy        412 GGCCGCGTCGGCGACCTGCCCAAGGCGGCGTGCCTCTGCGTCGACGAGGACTGCGCCCAC 471
                || | ||  |    | ||| || |  |  |     ||||  |||||| | |||  ||||
Db        454 AGCAGAGTGAGACCGCCGCCTAAAGGAGTTTCTGAATGCGCAGACGAGAATTGCTGCCAC 513

Qy        472 GTCGGGTGCCACCCCGCCGTCGCGTTCATGGCGCAGGTCCTCTTCGCCGCCTCCACCTTC 531
              || |  ||||  || || || |  ||||||  | |||| ||||     || | || ||||
Db        514 GTGGCTTGCCGGCCGGCGGTGGATTTCATGTTGGAGGTTCTCTATTTGGCTTTCATCTTC 573
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Qy        532 CAGGTCGCCGAGCTCACCAACCTCTTCCAGCGGCGTCTCCTTGATGTCCTTGATAAGGTT 591
Db        574 AAGATCCCTGAATTAATTACTCTCTATCAGAGGCACTTATTGGACGTTGTAGACAAAGTT 633

Qy        592 GAAGTAGATAACCTTCTATTGATCTTATCTGTTGCCAACTTATGCAACAAATCTTGCATG 651
Db        634 GTTATAGAGGACACATTGGTTATACTCAAGCTTGCTAATATATGTGGTAAAGCTTGTATG 693

Qy        652 AAACTGCTTGAAAGATGCCTTGATATGGTAGTCCGGTCAAACCTTGACATGATTACTCTT 711
Db        694 AAGCTATTGGATAGATGTAAAGAGATTATTGTCAAGTCTAATGTAGATATGGTTAGTCTT 753

Qy        712 GAGAAGTCATTGCCTCCAGATGTTATCAAGCAGATTATTGATGCACGCCTAAGCCTCGGA 771
Db        754 GAAAAGTCATTGCCGGAAGAGCTTGTTAAAGAGATAATTGATAGACGTAAAGAGCTTGGT 813

Qy        772 TTAATTTCACCAGAAAACAAGGGATTTCCTAACAAACATGTGAGGAGGATACACAGAGCC 831
Db        814 TTGGAGGTACCTAAAGTAAAG----------AAACATGTCTCGAATGTACATAAGGCA 861

Qy        832 CTTGACTCTGACGATGTAGAGCTAGTCAGGATGCTGCTCACTGAAGGACAGACAAATCTT 891
Db        862 CTTGACTCGGATGATATTGAGTTAGTCAAGTTGCTTTTGAAAGAGGATCACACCAATCTA 921

Qy        892 GATGATGCGTTTGCACTGCACTACGCCGTCGAACATTGTGACTCCAAAATTACAACCGAG 951
Db        922 GATGATGCGTGTGCTCTTCATTTCGCTGTTGCATATTGCAATGTGAAGACCGCAACAGAT 981

Qy        952 CTTTTGGATCTCGCACTTGCAGATGTTAATCATAGAAACCCAAGAGGTTATACTGTTCTT 1011
Db        982 CTTTTAAAACTTGATCTTGCCGATGTCAACCATAGGAATCCGAGGGGATATACGGTGCTT 1041

Qy       1012 CACATTGCTGCGAGGCGAAGAGAGCCTAAAATCATTGTCTCCCTTTTAACCAAGGGGGCT 1071
Db       1042 CATGTTGCTGCGATGCGGAAGGAGCCACAATTGATACTATCTCTATTGGAAAAAGGTGCA 1101

Qy       1072 CGACCAGCAGATGTTACATTCGATGGGAGAAAAGCGGTTCAAATCTCAAAAAGACTAACA 1131
Db       1102 AGTGCATCAGAAGCAACTTTGGAAGGTAGAACCGCACTCATGATCGCAAAACAAGCCACT 1161

Qy       1132 AAACAAGGGGATTACTTTGGGGTTACCGAAGAAGGAAAACCTTCTCCAAAAGATAGGTTA 1191
Db       1162 ATGGCGGTTGAATGTAATAATATCCCGGAGCAATGCAAGCATTCTCTCAAAGGCCGACTA 1221

Qy       1192 TGTATTGAAATACTGGAGCAAGCTGAAAGAAGGGACCCACAACTCGGAGAAGCATCAGTT 1251
Db       1222 TGTGTAGAAATACTAGAGCAAGAAGACAAACGAGAACAAATTCCTAGAGATGTTCCTCCC 1281

Qy       1252 TCTCTTGCAATGGCAGGTGAGAGTCTACGAGGAAGGTTGCTGTATCTTGAAAACCGAGTT 1311
Db       1282 TCTTTTGCAGTGGCGGCCGATGAATTGAAGATGACGCTGCTCGATCTTGAAAATAGAGTT 1341

Qy       1312 GCTTTGGCAAGGATTATGTTTCCGATGGAGGCAAGAGTAGCAATGGATATTGCTCAAGTG 1371
Db       1342 GCACTTGCTCAACGTCTTTTTCCAACGGAAGCACAAGCTGCAATGGAGATCGCCGAAATG 1401

Qy       1372 GATGGAACTTTGGAATTTAACCTG---GGTTCTGGTGCAAATCCACCTCCTGAAAGACAA 1428
Db       1402 AAGGGAACATGTGAGTTCATAGTGACTAGCCTCGAGCCTGACCGTCTCACTGGTACGAAG 1461

Qy       1429 CGGACAACTGTTGATCTAAATGAAAGTCCTTTCATAATGAAAGAAGAACACTTAGCTCGG 1488
Db       1462 AGAACATCACCGGGTGTAAAGATAGCACCTTTCAGAATCCTAGAAGAGCATCAAAGTAGA 1521

Qy       1489 ATGACAGCACTCTCCAAAACAGTGGAGCTCGGGAAACGCTTTTTCCCGCGATGTTCGAAC 1548
Db       1522 CTAAAAGCGCTTTCTAAAACCGTGGAACTCGGGAAACGATTCTTCCCGCGCTGTTCGGCA 1581

Qy       1549 GTGCTCGACAAGATCATGGA 1568
Db       1582 GTGCTCGACCAGATTATGAA 1601
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RESULT 10
US-08-989-478-9
; Sequence 9, Application US/08989478
; Patent No. 5986082
; GENERAL INFORMATION:
;   APPLICANT:  Uknes, Scott
;   APPLICANT:  Hunt, Michelle
;   APPLICANT:  Steiner, Henry-York
;   APPLICANT:  Ryals, John
;   TITLE OF INVENTION:  ALTERED FORMS OF THE NIM1 GENE CONFERRING
;   TITLE OF INVENTION:  DISEASE RESISTANCE IN PLANTS
;   NUMBER OF SEQUENCES:  32
;   CORRESPONDENCE ADDRESS:
;     ADDRESSEE:  No. 5986082artis Corporation
;     STREET:  3054 Cornwallis Road
;     CITY:  Research Triangle Park
;     STATE:  No. 5986082th Carolina
;     COUNTRY:  USA
;     ZIP:  27709
;   COMPUTER READABLE FORM:
;     MEDIUM TYPE:  Floppy disk
;     COMPUTER:  IBM PC compatible
;     OPERATING SYSTEM:  PC-DOS/MS-DOS
;     SOFTWARE:  PatentIn Release #1.0, Version #1.30
;   CURRENT APPLICATION DATA:
;     APPLICATION NUMBER:  US/08/989,478
;     FILING DATE:
;     CLASSIFICATION:
;   PRIOR APPLICATION DATA:
;     APPLICATION NUMBER:  US 60/033,177
;     FILING DATE:  13-DEC-1996
;   PRIOR APPLICATION DATA:
;     APPLICATION NUMBER:  US 60/034,379
;     FILING DATE:  27-DEC-1996
;   PRIOR APPLICATION DATA:
;     APPLICATION NUMBER:  US 60/034,382
;     FILING DATE:  27-DEC-1996
;   PRIOR APPLICATION DATA:
;     APPLICATION NUMBER:  US 60/034,730
;     FILING DATE:  10-JAN-1997
;   PRIOR APPLICATION DATA:
;     APPLICATION NUMBER:  US 60/035,021
;     FILING DATE:  10-JAN-1997
;   PRIOR APPLICATION DATA:
;     APPLICATION NUMBER:  US 60/035,022
;     FILING DATE:  10-JAN-1997
;   ATTORNEY/AGENT INFORMATION:
;     NAME:  Meigs, J. Timothy
;     REGISTRATION NUMBER:  38,241
;     REFERENCE/DOCKET NUMBER:  PF/5-21214/P1/CGC1911
;   TELECOMMUNICATION INFORMATION:
;     TELEPHONE:  (919) 541-8587
;     TELEFAX:  (919) 541-8689
; INFORMATION FOR SEQ ID NO:  9:
;   SEQUENCE CHARACTERISTICS:
;     LENGTH:  1597 base pairs
;     TYPE:  nucleic acid
;     STRANDEDNESS:  single
;     TOPOLOGY:  linear
;   MOLECULE TYPE:  cDNA
;   FEATURE:
;     NAME/KEY:  CDS
;     LOCATION:  1..1410
;     OTHER INFORMATION:  /product= "Altered form of NIM1"
;     OTHER INFORMATION:  /note= "N-terminal deletion compared to wild-type NIM1
;     OTHER INFORMATION:  sequence."
US-08-989-478-9

  Query Match           20.1%;  Score 409.2;  DB 2;  Length 1597;
  Best Local Similarity  58.3%;  Pred. No. 3.7e-79;
  Matches  808;  Conservative    0;  Mismatches  548;  Indels   30;  Gaps    4;

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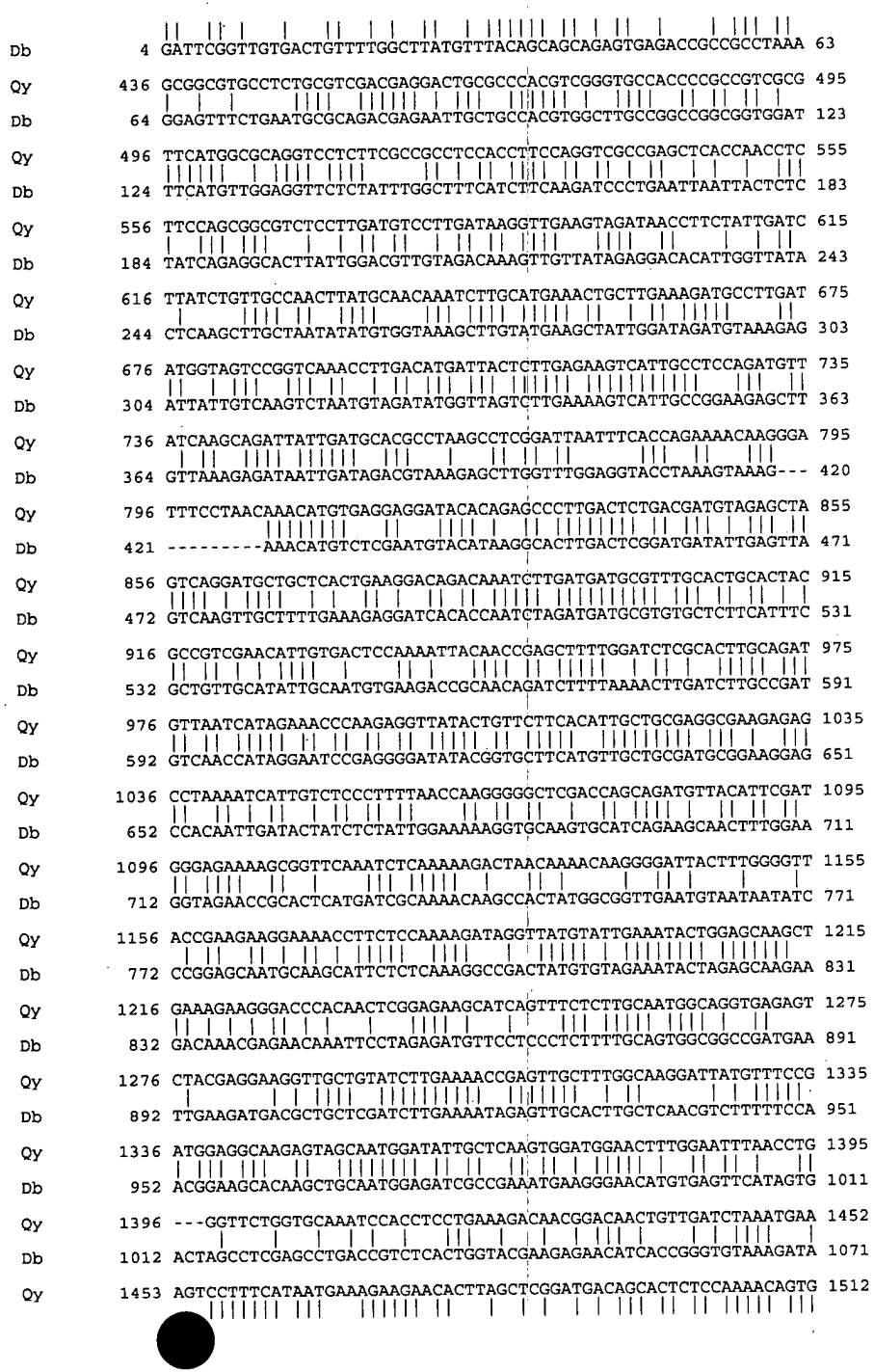

RESULT 11
US-08-996-685-9
; Sequence 9, Application US/08996685
; Patent No. 6031153
; GENERAL INFORMATION:
; APPLICANT: Ryals, John
; APPLICANT: Friedrich, Leslie
; APPLICANT: Uknes, Scott
; APPLICANT: Molina, Antonio
; APPLICANT: Ruess, Wilhelm
; APPLICANT: Knauf-Beiter, Gertrude
; APPLICANT: Kung, Ruth
; APPLICANT: Kessmann, Helmut
; APPLICANT: Oostendorp, Michael
; TITLE OF INVENTION: METHOD FOR PROTECTING PLANTS
; NUMBER OF SEQUENCES: 32
; CORRESPONDENCE ADDRESS:
; ADDRESSEE: No. 6031153artis Corporation
; STREET: 3054 Cornwallis Road
; CITY: Research Triangle Park
; STATE: No. 6031153th Carolina
; COUNTRY: USA
; ZIP: 27709
; COMPUTER READABLE FORM:
; MEDIUM TYPE: Floppy disk
; COMPUTER: IBM PC compatible
; OPERATING SYSTEM: PC-DOS/MS-DOS
; SOFTWARE: PatentIn Release #1.0, Version #1.30
; CURRENT APPLICATION DATA:
; APPLICATION NUMBER: US/08/996,685
; FILING DATE:
; CLASSIFICATION:
; PRIOR APPLICATION DATA:
; APPLICATION NUMBER: US 08/761,543
; FILING DATE: 6-DEC-1996
; PRIOR APPLICATION DATA:
; APPLICATION NUMBER: US 60/034,378
; FILING DATE: 27-DEC-1996
; PRIOR APPLICATION DATA:
; APPLICATION NUMBER: US 60/034,379
; FILING DATE: 27-DEC-1996
; PRIOR APPLICATION DATA:
; APPLICATION NUMBER: US 60/034,382
; FILING DATE: 27-DEC-1996
; PRIOR APPLICATION DATA:
; APPLICATION NUMBER: US 60/034,730
; FILING DATE: 10-JAN-1997
; PRIOR APPLICATION DATA:
; APPLICATION NUMBER: US 60/035,021
; FILING DATE: 10-JAN-1997

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;    PRIOR APPLICATION DATA:
;      APPLICATION NUMBER:  US 60/035,022
;      FILING DATE:  10-JAN-1997
;    PRIOR APPLICATION DATA:
;      APPLICATION NUMBER:  US 60/035,024
;      FILING DATE:  10-JAN-1997
;    PRIOR APPLICATION DATA:
;      APPLICATION NUMBER:  US 08/875,015
;      FILING DATE:  16-JUL-1997
;    ATTORNEY/AGENT INFORMATION:
;      NAME:  Meigs, J. Timothy
;      REGISTRATION NUMBER:  38,241
;      REFERENCE/DOCKET NUMBER:  PF/5-21215/P1/CGC1912
;    TELECOMMUNICATION INFORMATION:
;      TELEPHONE:  (919) 541-8587
;      TELEFAX:  (919) 541-8689
;  INFORMATION FOR SEQ ID NO:  9:
;    SEQUENCE CHARACTERISTICS:
;      LENGTH:  1597 base pairs
;      TYPE:  nucleic acid
;      STRANDEDNESS:  single
;      TOPOLOGY:  linear
;    MOLECULE TYPE:  cDNA
;    FEATURE:
;      NAME/KEY:  CDS
;      LOCATION:  1..1410
;      OTHER INFORMATION:  /product= "Altered form of NIM1"
;      OTHER INFORMATION:  /note= "N-terminal deletion compared to wild-type NIM1
;      OTHER INFORMATION:  sequence."
US-08-996-685-9

  Query Match             20.1%;  Score 409.2;  DB 3;  Length 1597;
  Best Local Similarity   58.3%;  Pred. No. 3.7e-79;
  Matches  808;  Conservative    0;  Mismatches  548;  Indels   30;  Gaps    4;

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Qy        496 TTCATGGCGCAGGTCCTCTTCGCCGCCTCCACCTTCCAGGTCGCCGAGCTCACCAACCTC 555
Db        124 TTCATGTTGGAGGTTCTCTATTTGGCTTTCATCTTCAAGATCCCTGAATTAATTACTCTC 183

Qy        556 TTCCAGCGGCGTCTCCTTGATGTCCTTGATAAGGTTGAAGTAGATAACCTTCTATTGATC 615
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Qy        616 TTATCTGTTGCCAACTTATGCAACAAATCTTGCATGAAACTGCTTGAAAGATGCCTTGAT 675
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Qy        676 ATGGTAGTCCGGTCAAACCTTGACATGATTACTCTTGAGAAGTCATTGCCTCCAGATGTT 735
Db        304 ATTATTGTCAAGTCTAATGTAGATATGGTTAGTCTTGAAAAGTCATTGCCGGAAGAGCTT 363

Qy        736 ATCAAGCAGATTATTGATGCACGCCTAAGCCTCGGATTAATTTCACCAGAAAACAAGGGA 795
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Qy        796 TTTCCTAACAAACATGTGAGGAGGATACACAGAGCCCTTGACTCTGACGATGTAGAGCTA 855
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Qy        856 GTCAGGATGCTGCTCACTGAAGGACAGACAAATCTTGATGATGCGTTTGCACTGCACTAC 915
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Qy        976 GTTAATCATAGAAACCCAAGAGGTTATACTGTTCTTCACATTGCTGCGAGGCGAAGAGAG 1035
Db        592 GTCAACCATAGGAATCCGAGGGGATATACGGTGCTTCATGTTGCTGCGATGCGGAAGGAG 651

Qy       1036 CCTAAAATCATTGTCTCCCTTTTAACCAAGGGGGCTCGACCAGCAGATGTTACATTCGAT 1095
Db        652 CCACAATTGATACTATCTCTATTGGAAAAAGGTGCAAGTGCATCAGAAGCAACTTTGGAA 711

Qy       1096 GGGAGAAAAGCGGTTCAAATCTCAAAAAGACTAACAAAACAAGGGGATTACTTTGGGGTT 1155
Db        712 GGTAGAACCGCACTCATGATCGCAAAACAAGCCACTATGGCGGTTGAATGTAATAATATC 771

Qy       1156 ACCGAAGAAGGAAAACCTTCTCCAAAAGATAGGTTATGTATTGAAATACTGGAGCAAGCT 1215
Db        772 CCGGAGCAATGCAAGCATTCTCTCAAAGGCCGACTATGTGTAGAAATACTAGAGCAAGAA 831

Qy       1216 GAAAGAAGGGACCCACAACTCGGAGAAGCATCAGTTTCTCTTGCAATGGCAGGTGAGAGT 1275
Db        832 GACAAACGAGAACAAATTCCTAGAGATGTTCCTCCCTCTTTTGCAGTGGCGGCCGATGAA 891

Qy       1276 CTACGAGGAAGGTTGCTGTATCTTGAAAACCGAGTTGCTTTGGCAAGGATTATGTTTCCG 1335
Db        892 TTGAAGATGACGCTGCTCGATCTTGAAAATAGAGTTGCACTTGCTCAACGTCTTTTTCCA 951

Qy       1336 ATGGAGGCAAGAGTAGCAATGGATATTGCTCAAGTGGATGGAACTTTGGAATTTAACCTG 1395
Db        952 ACGGAAGCACAAGCTGCAATGGAGATCGCCGAAATGAAGGGAACATGTGAGTTCATAGTG 1011

Qy       1396 ---GGTTCTGGTGCAAATCCACCTCCTGAAAGACAACGGACAACTGTTGATCTAAATGAA 1452
Db       1012 ACTAGCCTCGAGCCTGACCGTCTCACTGGTACGAAGAGAACATCACCGGGTGTAAAGATA 1071

Qy       1453 AGTCCTTTCATAATGAAAGAAGAACACTTAGCTCGGATGACAGCACTCTCCAAAACAGTG 1512
Db       1072 GCACCTTTCAGAATCCTAGAAGAGCATCAAAGTAGACTAAAAGCGCTTTCTAAAACCGTG 1131

Qy       1513 GAGCTCGGGAAACGCTTTTTCCCGCGATGTTCGAACGTGCTCGACAAGATCATG------ 1566
Db       1132 GAACTCGGGAAACGATTCTTCCCGCGCTGTTCGGCAGTGCTCGACCAGATTATGAACTGT 1191

Qy       1567 GATGATGAAACTGATCCGGTTTCCCTCGGAAGAGACACGTCCGCG---------GAGAAG 1617
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Qy       1618 AGGAAGAGGTTTCATGACCTGCAGGATGTTCTTCAGAAGGCATTCCACGAGGACAAGGAG 1677
Db       1252 AAGCAAAGGTACATGGAAATACAAGAGACACTAAAGAAGGCCTTTAGTGAGGACAATTTG 1311

Qy       1678 GAGAATGACAGGTCGGGGCTCTCGTCGTCGTCGTCATCGACATCGATCGGGGCCATTCGA 1737
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Qy       1738 CCAAGG 1743
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RESULT 12
US-08-989-478-13
; Sequence 13, Application US/08989478
; Patent No. 5986082
;  GENERAL INFORMATION:
;    APPLICANT:  Uknes, Scott
;    APPLICANT:  Hunt, Michelle
;    APPLICANT:  Steiner, Henry-York
;    APPLICANT:  Ryals, John
;    TITLE OF INVENTION:  ALTERED FORMS OF THE NIM1 GENE CONFERRING
;    TITLE OF INVENTION:  DISEASE RESISTANCE IN PLANTS
;    NUMBER OF SEQUENCES:  32
;    CORRESPONDENCE ADDRESS:
;      ADDRESSEE:  No. 5986082artis Corporation
```

```
;      STREET:  3054 Cornwallis Road
;      CITY:  Research Triangle Park
;      STATE:  No. 5986082th Carolina
;      COUNTRY:  USA
;      ZIP:  27709
;    COMPUTER READABLE FORM:
;      MEDIUM TYPE:  Floppy disk
;      COMPUTER:  IBM PC compatible
;      OPERATING SYSTEM:  PC-DOS/MS-DOS
;      SOFTWARE:  PatentIn Release #1.0, Version #1.30
;    CURRENT APPLICATION DATA:
;      APPLICATION NUMBER:  US/08/989,478
;      FILING DATE:
;      CLASSIFICATION:
;    PRIOR APPLICATION DATA:
;      APPLICATION NUMBER:  US 60/033,177
;      FILING DATE:  13-DEC-1996
;    PRIOR APPLICATION DATA:
;      APPLICATION NUMBER:  US 60/034,379
;      FILING DATE:  27-DEC-1996
;    PRIOR APPLICATION DATA:
;      APPLICATION NUMBER:  US 60/034,382
;      FILING DATE:  27-DEC-1996
;    PRIOR APPLICATION DATA:
;      APPLICATION NUMBER:  US 60/034,730
;      FILING DATE:  10-JAN-1997
;    PRIOR APPLICATION DATA:
;      APPLICATION NUMBER:  US 60/035,021
;      FILING DATE:  10-JAN-1997
;    PRIOR APPLICATION DATA:
;      APPLICATION NUMBER:  US 60/035,022
;      FILING DATE:  10-JAN-1997
;    ATTORNEY/AGENT INFORMATION:
;      NAME:  Meigs, J. Timothy
;      REGISTRATION NUMBER:  38,241
;      REFERENCE/DOCKET NUMBER:  PF/5-21214/P1/CGC1911
;    TELECOMMUNICATION INFORMATION:
;      TELEPHONE:  (919) 541-8587
;      TELEFAX:  (919) 541-8689
;  INFORMATION FOR SEQ ID NO:  13:
;    SEQUENCE CHARACTERISTICS:
;      LENGTH:  1194 base pairs
;      TYPE:  nucleic acid
;      STRANDEDNESS:  single
;      TOPOLOGY:  linear
;    MOLECULE TYPE:  cDNA
;    FEATURE:
;      NAME/KEY:  CDS
;      LOCATION:  1..1194
;      OTHER INFORMATION:  /product= "Altered form of NIM1"
;      OTHER INFORMATION:  /note= "N-terminal/C-terminal chimera."
US-08-989-478-13

  Query Match           19.6%;  Score 400.4;  DB 2;  Length 1194;
  Best Local Similarity  59.8%;  Pred. No. 2.6e-77;
  Matches  715;  Conservative    0;  Mismatches  466;  Indels   15;  Gaps    2;

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Qy        436 GCGGCGTGCCTCTGCGTCGACGAGGACTGCGCCCACGTCGGGTGCCACCCCGCCGTCGCG 495
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Db         64 GGAGTTTCTGAATGCGCAGACGAGAATTGCTGCCACGTGGCTTGCCGGCCGGCGGTGGAT 123

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Db        124 TTCATGTTGGAGGTTCTCTATTTGGCTTTCATCTTCAAGATCCCTGAATTAATTACTCTC 183

Qy        556 TTCCAGCGGCGTCTCCTTGATGTCCTTGATAAGGTTGAAGTAGATAACCTTCTATTGATC 615
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Db        184 TATCAGAGGCACTTATTGGACGTTGTAGACAAAGTTGTTATAGAGGACACATTGGTTATA 243

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Db        364 GTTAAAGAGATAATTGATAGACGTAAAGAGCTTGGTTTGGAGGTACCTAAAGTAAAG--- 420

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Db        421 ---------AAACATGTCTCGAATGTACATAAGGCACTTGACTCGGATGATATTGAGTTA 471

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              |||| | |||| | |  || |  || || ||||| |||||||||| ||| || || | |
Db        472 GTCAAGTTGCTTTTGAAAGAGGATCACACCAATCTAGATGATGCGTGTGCTCTTCATTTC 531

Qy        916 GCCGTCGAACATTGTGACTCCAAAATTACAACCGAGCTTTTGGATCTCGCACTTGCAGAT 975
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Db        532 GCTGTTGCATATTGCAATGTGAAGACCGCAACAGATCTTTTAAAACTTGATCTTGCCGAT 591

Qy        976 GTTAATCATAGAAACCCAAGAGGTTATACTGTTCTTCACATTGCTGCGAGGCGAAGAGAG 1035
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              ||  || | ||  | || || ||     || || ||  |  || |||| |  || || ||
Db        652 CCACAATTGATACTATCTCTATTGGAAAAAGGTGCAAGTGCATCAGAAGCAACTTTGGAA 711

Qy       1096 GGGAGAAAAGCGGTTCAAATCTCAAAAAGACTAACAAAACAAGGGGATTACTTTGGGGTT 1155
              || ||||  ||  |   ||| |||||  |  || |   |  || |  |  |   |
Db        712 GGTAGAACCGCACTCATGATCGCAAAACAAGCCACTATGGCGGTTGAATGTAATAATATC 771

Qy       1156 ACCGAAGAAGGAAAACCTTCTCCAAAAGATAGGTTATGTATTGAAATACTGGAGCAAGCT 1215
              | ||  || | || | |||||  ||||   |  ||||| | ||||||| |||||||
Db        772 CCGGAGCAATGCAAGCATTCTCTCAAAGGCCGACTATGTGTAGAAATACTAGAGCAAGAA 831

Qy       1216 GAAAGAAGGGACCCACAACTCGGAGAAGCATCAGTTTCTCTTGCAATGGCAGGTGAGAGT 1275
              || | | | || | |   |  ||||  |    ||| |||||  |||| |  ||
Db        832 GACAAACGAGAACAAATTCCTAGAGATGTTCCTCCCTCTTTTGCAGTGGCGGCCGATGAA 891

Qy       1276 CTACGAGGAAGGTTGCTGTATCTTGAAAACCGAGTTGCTTTGGCAAGGATTATGTTTCCG 1335
              |     | | ||||  |||||||||  |||||||  | ||       | | |||||
Db        892 TTGAAGATGACGCTGCTCGATCTTGAAAATAGAGTTGCACTTGCTCAACGTCTTTTTCCA 951

Qy       1336 ATGGAGGCAAGAGTAGCAATGGATATTGCTCAAGTGGATGGAACTTTGGAATTTAACCTG 1395
              | ||| |||  ||  |||||||  || ||  ||  || | |||||  |  || || |  ||
Db        952 ACGGAAGCACAAGCTGCAATGGAGATCGCCGAAATGAAGGGAACATGTGAGTTCATAGTG 1011

Qy       1396 ---GGTTCTGGTGCAAATCCACCTCCTGAAAGACAACGGACAACTGTTGATCTAAATGAA 1452
                 |   |  | | |  |||  |  |  | |||  |    | |  ||||   |
Db       1012 ACTAGCCTCGAGCCTGACCGTCTCACTGGTACGAAGAGAACATCACCGGGTGTAAAGATA 1071

Qy       1453 AGTCCTTTCATAATGAAAGAAGAACACTTAGCTCGGATGACAGCACTCTCCAAAACAGTG 1512
                 |||||| |||   |||||| ||  |  | | | | ||| || || ||||| |||
Db       1072 GCACCTTTCAGAATCCTAGAAGAGCATCAAAGTAGACTAAAAGCGCTTTCTAAAACCGTG 1131

Qy       1513 GAGCTCGGGAAACGCTTTTTCCCGCGATGTTCGAACGTGCTCGACAAGATCATGGA 1568
              || |||||||||| || |||||||| ||||||   |||||||| |||| ||| |
Db       1132 GAACTCGGGAAACGATTCTTCCCGCGCTGTTCGGCAGTGCTCGACCAGATTATGAA 1187

RESULT 13
US-08-996-685-13
; Sequence 13, Application US/08996685
; Patent No. 6031153
;  GENERAL INFORMATION:
;    APPLICANT:  Ryals, John
;    APPLICANT:  Friedrich, Leslie
;    APPLICANT:  Uknes, Scott
```

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;    APPLICANT:  Molina, Antonio
;    APPLICANT:  Ruess, Wilhelm
;    APPLICANT:  Knauf-Beiter, Gertrude
;    APPLICANT:  Kung, Ruth
;    APPLICANT:  Kessmann, Helmut
;    APPLICANT:  Oostendorp, Michael
;    TITLE OF INVENTION:  METHOD FOR PROTECTING PLANTS
;    NUMBER OF SEQUENCES:  32
;    CORRESPONDENCE ADDRESS:
;      ADDRESSEE:  No. 6031153artis Corporation
;      STREET:  3054 Cornwallis Road
;      CITY:  Research Triangle Park
;      STATE:  No. 6031153th Carolina
;      COUNTRY:  USA
;      ZIP:  27709
;    COMPUTER READABLE FORM:
;      MEDIUM TYPE:  Floppy disk
;      COMPUTER:  IBM PC compatible
;      OPERATING SYSTEM:  PC-DOS/MS-DOS
;      SOFTWARE:  PatentIn Release #1.0, Version #1.30
;    CURRENT APPLICATION DATA:
;      APPLICATION NUMBER:  US/08/996,685
;      FILING DATE:
;      CLASSIFICATION:
;    PRIOR APPLICATION DATA:
;      APPLICATION NUMBER:  US 08/761,543
;      FILING DATE:  6-DEC-1996
;    PRIOR APPLICATION DATA:
;      APPLICATION NUMBER:  US 60/034,378
;      FILING DATE:  27-DEC-1996
;    PRIOR APPLICATION DATA:
;      APPLICATION NUMBER:  US 60/034,379
;      FILING DATE:  27-DEC-1996
;    PRIOR APPLICATION DATA:
;      APPLICATION NUMBER:  US 60/034,382
;      FILING DATE:  27-DEC-1996
;    PRIOR APPLICATION DATA:
;      APPLICATION NUMBER:  US 60/034,730
;      FILING DATE:  10-JAN-1997
;    PRIOR APPLICATION DATA:
;      APPLICATION NUMBER:  US 60/035,021
;      FILING DATE:  10-JAN-1997
;    PRIOR APPLICATION DATA:
;      APPLICATION NUMBER:  US 60/035,022
;      FILING DATE:  10-JAN-1997
;    PRIOR APPLICATION DATA:
;      APPLICATION NUMBER:  US 60/035,024
;      FILING DATE:  10-JAN-1997
;    PRIOR APPLICATION DATA:
;      APPLICATION NUMBER:  US 08/875,015
;      FILING DATE:  16-JUL-1997
;    ATTORNEY/AGENT INFORMATION:
;      NAME:  Meigs, J. Timothy
;      REGISTRATION NUMBER:  38,241
;      REFERENCE/DOCKET NUMBER:  PF/5-21215/P1/CGC1912
;    TELECOMMUNICATION INFORMATION:
;      TELEPHONE:  (919) 541-8587
;      TELEFAX:  (919) 541-8689
;  INFORMATION FOR SEQ ID NO:  13:
;    SEQUENCE CHARACTERISTICS:
;      LENGTH:  1194 base pairs
;      TYPE:  nucleic acid
;      STRANDEDNESS:  single
;      TOPOLOGY:  linear
;    MOLECULE TYPE:  cDNA
;    FEATURE:
;      NAME/KEY:  CDS
;      LOCATION:  1..1194
;      OTHER INFORMATION:  /product= "Altered form of NIM1"
;      OTHER INFORMATION:  /note= "N-terminal/C-terminal chimera."
US-08-996-685-13

  Query Match           19.6%;  Score 400.4;  DB 3;  Length 1194;
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  Best Local Similarity   59.8%;  Pred. No. 2.6e-77;
  Matches  715;  Conservative    0;  Mismatches  466;  Indels   15;  Gaps    2;

Qy        376 GAGGCGCTGCGGCTGGTGCTCGACTACCTCTACAGCGGCCGCGTCGGCGACCTGCCCAAG 435
              ||  ||  |  |   ||  | |  ||  | |||||| || |  ||  |    | ||| ||
Db          4 GATTCGGTTGTGACTGTTTTGGCTTATGTTTACAGCAGCAGAGTGAGACCGCCGCCTAAA 63

Qy        436 GCGGCGTGCCTCTGCGTCGACGAGGACTGCGCCCACGTCGGGTGCCACCCCGCCGTCGCG 495
              |  |  |    ||||  |||||| | |||  |||||| |  ||||  || || || |
Db         64 GGAGTTTCTGAATGCGCAGACGAGAATTGCTGCCACGTGGCTTGCCGGCCGGCGGTGGAT 123

Qy        496 TTCATGGCGCAGGTCCTCTTCGCCGCCTCCACCTTCCAGGTCGCCGAGCTCACCAACCTC 555
              ||||||  | ||||  ||||      || | || |||| || || |  ||  | |  |||
Db        124 TTCATGTTGGAGGTTCTCTATTTGGCTTTCATCTTCAAGATCCCTGAATTAATTACTCTC 183

Qy        556 TTCCAGCGGCGTCTCCTTGATGTCCTTGATAAGGTTGAAGTAGATAACCTTCTATTGATC 615
              |  |||  |||    |  | || ||  | || ||  ||||    ||||  ||    |  | ||
Db        184 TATCAGAGGCACTTATTGGACGTTGTAGACAAAGTTGTTATAGAGGACACATTGGTTATA 243

Qy        616 TTATCTGTTGCCAACTTATGCAACAAATCTTGCATGAAACTGCTTGAAAGATGCCTTGAT 675
              |    ||||  ||  ||||     |||  ||||  ||||  ||  |  ||  |||||     ||
Db        244 CTCAAGCTTGCTAATATATGTGGTAAAGCTTGTATGAAGCTATTGGATAGATGTAAAGAG 303

Qy        676 ATGGTAGTCCGGTCAAACCTTGACATGATTACTCTTGAGAAGTCATTGCCTCCAGATGTT 735
              ||  | |||  |||  ||  |  || |||  |||  ||||||  ||||||||||||     |||  ||
Db        304 ATTATTGTCAAGTCTAATGTAGATATGGTTAGTCTTGAAAAGTCATTGCCGGAAGAGCTT 363

Qy        736 ATCAAGCAGATTATTGATGCACGCCTAAGCCTCGGATTAATTTCACCAGAAAACAAGGGA 795
              | ||  ||||  ||||||  |||  |  || || ||      |||  ||   |||
Db        364 GTTAAAGAGATAATTGATAGACGTAAAGAGCTTGGTTTGGAGGTACCTAAAGTAAAG--- 420

Qy        796 TTTCCTAACAAACATGTGAGGAGGATACACAGAGCCCTTGACTCTGACGATGTAGAGCTA 855
                  ||||||||    ||   ||||  |  || |||||||| || ||| | ||| ||
Db        421 ---------AAACATGTCTCGAATGTACATAAGGCACTTGACTCGGATGATATTGAGTTA 471

Qy        856 GTCAGGATGCTGCTCACTGAAGGACAGACAAATCTTGATGATGCGTTTGCACTGCACTAC 915
              |||| | ||||  | |  || |  || || |||||  |||||||||| ||| || || | |
Db        472 GTCAAGTTGCTTTTGAAAGAGGATCACACCAATCTAGATGATGCGTGTGCTCTTCATTTC 531

Qy        916 GCCGTCGAACATTGTGACTCCAAAATTACAACCGAGCTTTTGGATCTCGCACTTGCAGAT 975
              || || | |||| |  || |   |||| || |||||  | || |  |||| |||
Db        532 GCTGTTGCATATTGCAATGTGAAGACCGCAACAGATCTTTTAAAACTTGATCTTGCCGAT 591

Qy        976 GTTAATCATAGAAACCCAAGAGGTTATACTGTTCTTCACATTGCTGCGAGGCGAAGAGAG 1035
              || || ||||| || || || || ||||| || |||||  |||||||||| ||| |  |||
Db        592 GTCAACCATAGGAATCCGAGGGGATATACGGTGCTTCATGTTGCTGCGATGCGGAAGGAG 651

Qy       1036 CCTAAAATCATTGTCTCCCTTTTAACCAAGGGGGCTCGACCAGCAGATGTTACATTCGAT 1095
              ||  ||  |  ||  | || || ||     || || ||  |  || |||| |  || || ||
Db        652 CCACAATTGATACTATCTCTATTGGAAAAAGGTGCAAGTGCATCAGAAGCAACTTTGGAA 711

Qy       1096 GGGAGAAAAGCGGTTCAAATCTCAAAAAGACTAACAAAACAAGGGGATTACTTTGGGGTT 1155
              || ||||  ||  |   ||| |||||  |  || |     |  || |   |  |  |  |
Db        712 GGTAGAACCGCACTCATGATCGCAAAACAAGCCACTATGGCGGTTGAATGTAATAATATC 771

Qy       1156 ACCGAAGAAGGAAAACCTTCTCCAAAAGATAGGTTATGTATTGAAATACTGGAGCAAGCT 1215
              | ||  || | ||  | |||||  ||||   |  |||||  | ||||||||  |||||||
Db        772 CCGGAGCAATGCAAGCATTCTCTCAAAGGCCGACTATGTGTAGAAATACTAGAGCAAGAA 831

Qy       1216 GAAAGAAGGGACCCACAACTCGGAGAAGCATCAGTTTCTCTTGCAATGGCAGGTGAGAGT 1275
              || | | || | |   |  |||| |   |  ||| |||| |||| |  ||
Db        832 GACAAACGAGAACAAATTCCTAGAGATGTTCCTCCCTCTTTTGCAGTGGCGGCCGATGAA 891

Qy       1276 CTACGAGGAAGGTTGCTGTATCTTGAAAACCGAGTTGCTTTGGCAAGGATTATGTTTCCG 1335
              |      | | ||||  ||||||||||  |||||||  | ||      | | |||||
Db        892 TTGAAGATGACGCTGCTCGATCTTGAAAATAGAGTTGCACTTGCTCAACGTCTTTTTCCA 951

Qy       1336 ATGGAGGCAAGAGTAGCAATGGATATTGCTCAAGTGGATGGAACTTTGGAATTTAACCTG 1395
              | ||| |||  ||  |||||||| || ||  || || | |||||  |  || || |  ||
Db        952 ACGGAAGCACAAGCTGCAATGGAGATCGCCGAAATGAAGGGAACATGTGAGTTCATAGTG 1011

Qy       1396 ---GGTTCTGGTGCAAATCCACCTCCTGAAAGACAACGGACAACTGTTGATCTAAATGAA 1452
                   |   |  | | | |  |||  |  | | ||| |   | | ||||  |
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Db       1012 ACTAGCCTCGAGCCTGACCGTCTCACTGGTACGAAGAGAACATCACCGGGTGTAAAGATA 1071

Qy       1453 AGTCCTTTCATAATGAAAGAAGAACACTTAGCTCGGATGACAGCACTCTCCAAAACAGTG 1512

Db       1072 GCACCTTTCAGAATCCTAGAAGAGCATCAAAGTAGACTAAAAGCGCTTTCTAAAACCGTG 1131

Qy       1513 GAGCTCGGGAAACGCTTTTTCCCGCGATGTTCGAACGTGCTCGACAAGATCATGGA 1568

Db       1132 GAACTCGGGAAACGATTCTTCCCGCGCTGTTCGGCAGTGCTCGACCAGATTATGAA 1187


RESULT 14
US-09-519-232-5
; Sequence 5, Application US/09519232
; Patent No. 6528702
; GENERAL INFORMATION:
;  APPLICANT: Salmeron, John
;  APPLICANT: Weislo, Laura
;  APPLICANT: Willits, Michael
;  APPLICANT: Mengiste, Tesfaye
;  TITLE OF INVENTION: NOVEL PLANT GENES AND USES THEREOF
;  FILE REFERENCE: S-30857A/RTP2095
;  CURRENT APPLICATION NUMBER: US/09/519,232
;  CURRENT FILING DATE: 2000-03-06
;  NUMBER OF SEQ ID NOS: 74
;  SOFTWARE: PatentIn Ver. 2.1
; SEQ ID NO 5
;   LENGTH: 1740
;   TYPE: DNA
;   ORGANISM: Brassica napus
;   FEATURE:
;   NAME/KEY: CDS
;   LOCATION: (1)..(1737)
;   OTHER INFORMATION: Canola cDNA sequence
US-09-519-232-5

  Query Match             18.7%;  Score 381.8;  DB 4;  Length 1740;
  Best Local Similarity   58.4%;  Pred. No. 3e-73;
  Matches  812;  Conservative    3;  Mismatches  510;  Indels   66;  Gaps    6;

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Qy        411 CGGCCGCGTCGGCGACCTGCCCAAGGCGGCGTGCCTCTGCGTCGACGAGGACTGCGCCCA 470

Db        405 CGGCAGAGTGAGGCCGCCTCCGAAGGGAGTTTCTGAATGCGCAGACGAKAGCTGCTGCCA 464

Qy        471 CGTCGGGTGCCACCCCGCCGTCGCGTTCATGGCGCAGGTCCTCTTCGCCGCCTCCACCTT 530

Db        465 CGTGGCGTGCCGTCCGGCTGTGGATTTCATGGTGGAGGTTCTCTACTTGGCTTTCGTCTT 524

Qy        531 CCAGGTCGCCGAGCTCACCAACCTCTTCCAGCGGCGTCTCCTTGATGTCCTTGATAAGGT 590

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Qy        651 GAAACTGCTTGAAAGATGCCTTGATATGGTAGTCCGGTCAAACCTTGACATGATTACTCT 710

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Qy        711 TGAGAAGTCATTGCCTCCAGATGTTATCAAGCAGATTATTGATGCACGCCTAAGCCTCGG 770

Db        705 AAAGAAGTCATTGCCTGAGRACATTGCCAAGCAAGTAATCGATATCCGCAAAGAGCTCGG 764

Qy        771 ATTAATTTCACCAGAAAACAAGGGATTTCCTAACAAACATGTGAGGAGGATACACAGAGC 830

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Qy        951 GCTTTTGGATCTCGCACTTGCAGATGTTAATCATAGAAACCCAAGAGGTTATACTGTTCT 1010

Db        933 TCTCCTGGAACTGGGGTTTGCGGATGTCAACCGGAGAAACCCGAGAGGGTACACGGTAAT 992

Qy       1011 TCACATTGCTGCGAGGCGAAGAGAGCCTAAAATCATTGTCTCCCTTTTAACCAAGGGGGC 1070

Db        993 TCACGTCGCTGCGATGAGGAAAGAGCCGACACTGATAGCATTGTTGTTGACGAAAGGGGC 1052

Qy       1071 TCGACCAGCAGATGTTACATTCGATGGGAGAAAAGCGGTTCAAATCTCAAAAAGACTAAC 1130

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Qy       1131 AAAACAAGGGGATTACTTTGGGGTTACCGAAGAAGGAAAACCTTCTCCAAAAGATAGGTT 1190

Db       1113 TA---AGGCGGCCGAGTGTTGTATTCTGGAGAAAGGGAAGTTAGCTGCCAAAGGCGGAGT 1169

Qy       1191 ATGTATTGAAATACTGGAGCAAGCTGAAAGAA---GGGACCCACAACTCGGAGAAGCATC 1247

Db       1170 ATGTGTAGAGATACTCAAGCAACCAGACAACACACGAGAACCATTTCCTGAAGATGTTTC 1229

Qy       1248 AGTTTCTCTTGCAATGGCAGGTGAGAGTCTACGAGGAAGGTTGCTGTATCTTGAAAACCG 1307

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Qy       1308 AGTTGCTTTGGCAAGGATTATGTTTCCGATGGAGGCAAGAGTAGCAATGGATATTGCTCA 1367

Db       1290 AGTTCAAATGGCTCGATGTCTCTATCCAATGGAAGCACAAGTTGCAATGGATTTCGCCCG 1349

Qy       1368 AGTGGATGGAACTTTGGAATTTAACCTGGGTTCTGGTGCAAATCCACCTCCTGAAAGACA 1427

Db       1350 AATGAAGGGAACACGCGAGTTTGTCGTG------------------------------ 1377

Qy       1428 ACGGACAACTGTTGATCTAAATGAAAGTCCTTTCATAATGAAAGAAGAACACTTAGCTCG 1487

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Db       1617 AATGGCGTTTAGTAAAGACAAGGAGGATCTTGGAAAGTCGTCTCTCTCAGCTTCGTCTTC 1676

Qy       1713 ATCGACATCGA 1723

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RESULT 15
US-09-519-232-19
; Sequence 19, Application US/09519232
; Patent No. 6528702
; GENERAL INFORMATION:
;  APPLICANT: Salmeron, John
;  APPLICANT: Weislo, Laura
;  APPLICANT: Willits, Michael
;  APPLICANT: Mengiste, Tesfaye
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;  TITLE OF INVENTION: NOVEL PLANT GENES AND USES THEREOF
;  FILE REFERENCE: S-30857A/RTP2095
;  CURRENT APPLICATION NUMBER: US/09/519,232
;  CURRENT FILING DATE: 2000-03-06
;  NUMBER OF SEQ ID NOS: 74
;  SOFTWARE: PatentIn Ver. 2.1
; SEQ ID NO 19
;   LENGTH: 1803
;   TYPE: DNA
;   ORGANISM: Arabidopsis thaliana
;   FEATURE:
;   NAME/KEY: CDS
;   LOCATION: (1)..(1803)
;   OTHER INFORMATION: AtNMLc4-2 genomic sequence
US-09-519-232-19

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  Matches  778;  Conservative    0;  Mismatches  551;  Indels   27;  Gaps    4;

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Qy        411 CGGCCGCGTCGGCGACCTGCCCAAGGCGGCGTGCCTCTGCGTCGACGAGGACTGCGCCCA 470
Db        408 CGGCAGAGTGAGGTCCCCGCCGAAGGGAGCTTCTGCTTGCGTAGACGACGATTGTTGCCA 467

Qy        471 CGTCGGGTGCCACCCCGCCGTCGCGTTCATGGCGCAGGTCCTCTTCGCCGCCTCCACCTT 530
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Qy        531 CCAGGTCGCCGAGCTCACCAACCTCTTCCAGCGGCGTCTCCTTGATGTCCTTGATAAGGT 590
Db        528 CCAGATTCAAGAATTAGTTACTCTGTATGAGAGGCAGTTCTTGGAAATTGTAGACAAAGT 587

Qy        591 TGAAGTAGATAACCTTCTATTGATCTTATCTGTTGCCAACTTATGCAACAAATCTTGCAT 650
Db        588 TGTAGTCGAAGACATCTTGGTTATATTCAAGCTTGATACTCTATGTGGTACAACATACAA 647

Qy        651 GAAACTGCTTGAAAGATGCCTTGATATGGTAGTCCGGTCAAACCTTGACATGATTACTCT 710
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Qy        711 TGAGAAGTCATTGCCTCCAGATGTTATCAAGCAGATTATTGATGCACGCCTAAGCCTCGG 770
Db        708 TGAGAAGTCTTTACCTCAACACATTTTCAAGCAAATCATAGACATCCGCGAAGCGCTCTG 767

Qy        771 ATTAATTTCACCAGAAAACAAGGGATTTCCTAACAAACATGTGAGGAGGATACACAGAGC 830
Db        768 TCTAGAGCCACCTAAA----------CTAGAAAGGCATGTCAAGAACATATACAAGGC 815

Qy        831 CCTTGACTCTGACGATGTAGAGCTAGTCAGGATGCTGCTCACTGAAGGACAGACAAATCT 890
Db        816 GCTAGACTCAGATGATGTTGAGCTTGTCAAGATGCTTTTGCTAGAAGGACACACCAATCT 875

Qy        891 TGATGATGCGTTTGCACTGCACTACGCCGTCGAACATTGTGACTCCAAAATTACAACCGA 950
Db        876 CGATGAGGCGTATGCTCTTCATTTTGCTATCGCTCACTGCGCTGTGAAGACCGCGTATGA 935

Qy        951 GCTTTTGGATCTCGCACTTGCAGATGTTAATCATAGAAACCCAAGAGGTTATACTGTTCT 1010
Db        936 TCTCCTCGAGCTTGAGCTTGCGGATGTTAACCTTAGAAATCCGAGGGGATACACTGTGCT 995

Qy       1011 TCACATTGCTGCGAGGCGAAGAGAGCCTAAAATCATTGTCTCCCTTTTAACCAAGGGGGC 1070
Db        996 TCATGTTGCTGCGATGCGGAAGGAGCCGAAGTTGATAATATCTTTGTTAATGAAAGGGGC 1055

Qy       1071 TCGACCAGCAGATGTTACATTCGATGGGAGAAAAGCGGTTCAAATCTCAAAAAGACTAAC 1130
Db       1056 AAATATTTTAGACACAACATTGGATGGTAGAACCGCTTTAGTGATTGTAAAACGACTCAC 1115

Qy       1131 AAAACAAGGGGATTACTTTGGGGTTACCGAAGAAGGAAAACCTTCTCCAAAAGATAGGTT 1190

Db       1116 TAAAGCGGATGACTACAAAACTAGTACGGAGGACGGTACGCCTTCTCTGAAAGGCGGATT 1175

Qy       1191 ATGTATTGAAATACTGGAGCAAGCTGAAAGAAGGG---ACCCACAACTCGGAGAAGCATC 1247
Db       1176 ATGCATAGAGGTACTTGAGCATGAACAAAAACTAGAATATTTGTCGCCTATAGAGGCTTC 1235

Qy       1248 AGTTTCTCTTGCAATGGCAGGTGAGAGTCTACGAGGAAGGTTGCTGTATCTTGAAAACCG 1307
Db       1236 ACTTTCTCTTCCAGTAACTCCAGAGGAGTTGAGGATGAGGTTGCTCTATTATGAAAACCG 1295

Qy       1308 AGTTGCTTTGGCAAGGATTATGTTTCCGATGGAGGCAAGAGTAGCAATGGATATTGCTCA 1367
Db       1296 AGTTGCACTTGCTCGACTTCTCTTTCCAGTGGAAACTGAAACTGTACAGGGTATTGCCAA 1355

Qy       1368 AGTGGATGGAACTTTGGAATTTA---ACCTGGGTTCTGGTGCAAATCCACCTCCTGAAAG 1424
Db       1356 ATTGGAGGAAACATGCGAGTTTACAGCTTCTAGTCTCGAGCCTGATCATCACATTGGTGA 1415

Qy       1425 ACAACGGACAACTGTTGATCTAAATGAAAGTCCTTTCATAATGAAAGAAGAACACTTAGC 1484
Db       1416 AAAGCGGACATCACTAGACCTAAATATGGCGCCGTTCCAAATCCATGAGAAGCATTTGAG 1475

Qy       1485 TCGGATGACAGCACTCTCCAAAACAGTGGAGCTCGGGAAACGCTTTTTCCCGCGATGTTC 1544
Db       1476 TAGACTAAGAGCACTTTGTAAAACCGTGGAACTGGGGAAACGCTACTTCAAACGATGTTC 1535

Qy       1545 GAACGTGCTCGACAAGATCATGGATGATGAAACTGATCCGGTTTCCCTCGGAAGAGACAC 1604
Db       1536 GCTTGATCACTTTATGGATACTGAGGACTTGAATCATCTTGCTAGCGTAGAAGAAGATAC 1595

Qy       1605 GTCCGCG---------GAGAAGAGGAAGAGGTTTCATGACCTGCAGGATGTTCTTCAGAA 1655
Db       1596 TCCTGAGAAACGGCTACAAAAGAAGCAAAGGTACATGGAACTACAAGAGACTCTGATGAA 1655

Qy       1656 GGCATTCCACGAGGACAAGGAGGAGAATGACAGGTC 1691
Db       1656 GACCTTTAGTGAGGACAAGGAGGAATGTGGAAAGTC 1691

Search completed: December  7, 2003, 00:31:00
Job time : 131 secs
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